NOTE TO USERS

The Currency of the Clinical Photograph: Science, Photography and the Dream of the Legible Body

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ABSTRACT

The Currency of the Clinical Photograph: Science, Photography and the Dream of the Legible Body

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Clinical photographs, images of the body made under the auspices of science, have a powerful rhetorical effect. These seemingly objective representations have had the effect of constituting and legitimating definitions of normalcy, class, criminality, race, ethnicity, gender, and sexuality advanced by a range of scientific projects in the nineteenth and twentieth centuries.

The development of a theoretical and methodological framework for the study of clinical photography occupies the first half of this project. Drawing on multiple disciplines, it addresses such central issues as: the rhetoric and culture of science, its relationship to the larger culture, the representation of difference, the currency of the photograph, and the role of the visual in the exercise of hegemonic power.

Three case studies using this framework follow. The first traces the range of meanings imputed to a single image between its 1878 creation and its current status as part of the Burns Archive. The second addresses the influence of modernist visual culture on the aesthetic reforms advocated in didactic manuals as part of the professionalization of clinical photography which followed World War Two. The third considers American psychologist William H. Sheldon's reliance on photography for his somatotype studies in which the definition of normal masculinity is the main, though unacknowledged, theme.

Finally, visual art practice, including my own, is considered as a complement to the scholarly approaches described above, in that both are avenues for the disruption of naturalized, common sense assumptions about human difference and the role of clinical photography in its definition.

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For my parents

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Introduction

What rests at the center of this study is an examination of the role that photography has played in the scientific definition of human difference. Science has, at different moments, reported the discovery of certain facts about the nature of non-dominant groups in society. Women have been shown to be inherently physically and mentally weaker than men, nonwhites, brutish, less intelligent and naturally suited to menial labour, lesbians, unnatural, mannish, frustrated women, gay men, weak, effeminate and unreliable and so on.[1] Clinical images, photographs of the body made under the auspices of science, have had a powerful rhetorical effect in the presentation of such findings. These seemingly objective, transparent, or disinterested representations have had the effect of constituting and legitimating the definitions of sanity, normalcy, class, criminality, race, ethnicity, gender, and sexuality advanced by a range of scientific projects in the nineteenth and twentieth centuries.

The prestige of science, and its status as the purveyor of objective truth about the world, could be argued to be the hallmark of the twentieth century. In its analogous role as the preeminent form of representation in the modern period, photography, in drawing on the same discourses as science, has been regarded as an unparalleled source of objective images. Separately both science and photography have considerable power to tell us the truth about ourselves and others. Imagine how that effect might be redoubled in cases where photography is used as a means of providing scientific evidence. The rhetoric of objectivity associated with science and photography has meant that these fields have been

[1] Examples of such projects are addressed by Cynthia Eagle Russett, Alan Trachtenberg, Jennifer Terry and my own study of W. H. Sheldon, respectively.

implicated in telling not just truths, but unassailable truths about the objects or subjects which have come under their gaze. In cases where the objects of study have been human subjects, the truths which science and photography have told have often served to reinforce dominant assumptions and prejudices about what is natural or normal.

To a contemporary reader, however, perhaps the most fascinating iterations of such projects are those in which photography was purported to show something that is no longer regarded as visible or photographable. While photography was used to show sex or racial differences which are still regarded as visible (although ideas about what those differences mean have certainly changed), many images were made to show traits which would now be regarded as interior, social or cultural, and, thus, invisible. How could a clinical photograph provide evidence that the subject pictured was lesbian, homosexual, working class, Jewish, mentally ill, criminal, or morally degenerate?

Whether or not their originators understood their projects as being related to physiognomy, such assumptions of bodily legibility find their roots in projects which predate photography, such as Johann Kaspar Lavater's and Caesare Lombroso's studies of human character. Characteristics which are now seen as invisible in somatic terms were understood as being evident in a person's physique, and, as such, photographable. Hands, feet, hair, noses, genitals, ears, head shape, height, posture, and so on, were all proposed as potential sites where measurable differences might be found and evidence of inherent difference read. While it is easy to poke fun at the phrenologists and physiognomists for whom the idea of legible somatic difference was a real, quantifiable possibility, we should pause before congratulating ourselves too much for our advanced understanding. Such ideas have been very durable at the level of common sense and we are by no means immune to the allure of the idea that we should be able to judge books by their covers.

Certainly many of the researchers who used photography as a tool to show evidence of embodied difference saw their own projects as being in no way related to such pseudo-scientific pursuits, just as we would reject the idea that the Human Genome Project is the descendent of the desire for the legible body. It is, however, a very seductive idea, providing answers to questions about the origins and nature of human character, and thus offering a means of identifying and controlling social problems at the level of the individual.[2]

As a feminist, having identified what seemed to me a powerful tool for the maintenance of common sense ideas about what it means to be female, or homosexual, or poor, or in some way other, the desire to examine the workings of this particular photographic practice in order to challenge the naturally truthful appearance of these images was irresistible. As a student and practitioner of photography, the clinical image provides an ideal case study for the way in which dominant ideologies shape representational practices, and vice versa—a vehicle for the study of the political effects of representation. It soon became clear however, that little work had been done on the subject of the clinical image and that considerable work lay ahead of me in terms of identifying theories and methodologies which might prove appropriate to the task at hand. In fact, the question of how to approach these visual documents occupies the entire first half of this project. However, before introducing the multidisciplinary sources which served as the groundwork for this project, I would like to address a few words to the

[2] A simple example of this is the popular idea that criminals ought to look different from everyone else. One of the features of the media coverage of Paul Bernardo and Karla Homolka's arrest and trial were photographs of the two of them and the almost disbelieving and often repeated observation that they "looked like the perfect couple." It was as if their ordinary, or even attractive, appearance broke a kind of rule about how murderers are expected to look, that, somehow, their dangerous insides should be evident on the outside. The incongruity between the exterior and interior was remarked upon by astounded observers in a way which suggested that the failure of this attractive exterior to betray any of the inner ugliness made the crimes that much more unnatural and incomprehensible.

relationship between science and photography, and the definition of the clinical image.

The invention of photography coincided with the rise of modern scientific medicine. In fact, even the most casual perusal of histories of photography reveals that many of the early practitioners and innovators were also medical doctors—men of science with access to the necessary resources and leisure time, as well as the basic scientific literacy to grapple with the chemistry and optics involved. Like modern medicine, photography was made possible by the rise of laboratory science. A long way from Kodak's "You Press the Button, We Do the Rest" campaign of the late nineteenth century, at its most elementary, early photography asked practitioners to become adept at preparing and sensitizing plates (in the case of daguerreotypes, using dangerous mercury vapor in small enclosed spaces), developing them once exposed, and, for some processes, printing them. More advanced practitioners were also innovators, experimenting with new materials and methods, seeking increased permanence, clarity, portability and so on and many early clinical images were produced by physicians who had taken up photography as a hobby.

Sharing as it does with science and medicine claims of access to objective truth, it is not surprising that photography was adopted to represent the subjects of such diverse scientific projects as archaeology, microscopy, astronomy, anatomy, and biology, as soon as the technology was adequate to accurately capture a given phenomenon. Some of the earliest images are really quite remarkable, considering the available techniques. By the 1850s John Whipple had produced daguerreotypes of the surface of the moon at Harvard, and John Draper, photomicroscopic images. However, many unclear, unremarkable images were also produced. Often photography was used before the medium (or the operator) was really sufficiently advanced to provide any clear representation of the

situation. Examples of truly uninformative images can be found for example in early twentieth century issues of the Journal of the American Medical Association, causing one to wonder at their inclusion—although surely it is no accident. That the authors of the articles chose to include the images with their submission and the publishers went to the expense of reproducing them, suggests that medium's reputation as a provider of objective, or neutral images made it attractive to practitioners of disciplines which valorized those characteristics, even when individual images failed to deliver. The popular understanding of the nature of photography as the mirror of nature (a common description of daguerreotypes) or pictures painted by Nature or the Sun without the interference of any human agent resonated with the ideals of scientific practice.

For the purposes of this study, the clinical photograph is defined as being any photomechanical image of the body created under science and medicine, broadly construed to include such fields as anthropology, psychology, criminology, and sexology. This expanded view of what counts as science finds precedence in Feminist Science and Technology Studies (STS), which has argued that those disciplines which base their claims of legitimacy on appeals to scientific method and objectivity are also the proper objects of STS. As Cynthia Eagle Russett points out, one cannot, for example, really look at Herbert Spencer's social darwinism as being outside of science.

However, not all images of the body made within these disciplines form part of the corpus to be addressed. This study traces the history of the clinical image from the appearance of the daguerreotype and calotype in 1839, through various technological developments up to the present, but is limited to photomechanical, indexical processes, leaving the new issues raised by the digital revolution to be dealt with by those specializing in the field.[3] Some other photographic practices, such as those which result in

[3] Martin Lister's edited collection, The Photographic Image in Digital Culture, is a good example.

microscopic or interior views of the body, are also largely outside the scope of this study.[4] While such images can play a role in the scientific construction of readings of difference, as when the concept of "Negro blood" was made visible through images of sickle cell anemia (Wailoo), representations of difference at the cellular or genetic level are based on a different set of assumptions about the legibility of the body than those which support the clinical photograph. While clinical photographs present a deceptively transparent image which rests on what Roland Barthes would refer to as the "evidentiary force" of the photograph (this was there, then), microscopic or fragmentary views demand interpretation. Consider the fact that special knowledge is often required before these images can even be identified as representations of the body at all. Finally, moving images are excluded. Even though film shares with photography an indexical, and presumed truthful, relation to the object pictured, the need to limit the project over-rides the temptation to consider these representations of the body.

Despite these limitations, however, there is no single body of theory which specifically addresses the issues surrounding the clinical photograph. One reason for this is institutional; photography itself is a kind of disciplinary orphan. While it might be assumed to belong to art history, only certain kinds of photographic practice have been widely accepted in the discipline in the past thirty years, and those images which are outside of fine art practice, or have not been rediscovered as masterpieces, have been beyond the pale. Outside of art history, works on photography range across the disciplines of philosophy, history, sociology, anthropology, cultural studies and cinema. In fact, although it may seem paradoxical given the exclusion of scientific movies as case studies, readings in film studies contribute significantly to the theories of representation

[4] Interior views made through x-ray processes, have been examined in other studies, particularly film scholar Lisa Cartwright's Screening the Body.

and identity which inform the project. However, even given this multidisciplinary list of sources of photographic studies, very little of the writing about photography in these fields is concerned with the clinical image in any direct way.

As a means of remedying this lack, the first three chapters of this study are devoted to the examination of bodies of scholarship which might serve as the groundwork for the study of clinical images of the body, including science and technology studies, cultural studies and theoretical writing on photography, and feminist and queer theories of representation. These fields address subjects central to the project, such as: the rhetoric and culture of science and the relationship between science and culture, the representation of difference, the currency of photographic meaning, the role of the visual in the exercise of hegemonic power, and the possibility of intervening in these through scholarship, activism and visual art practice. These theoretical foundations for the study of the clinical image are complemented and expanded by an examination in chapter four of the methodologies employed by the modest number of studies in history and other disciplines which have archival, clinical images as their subject. The fourth chapter is a kind of transitional chapter between the theoretical framework established in the first part of the project and the remaining three chapters which directly examine clinical images. These case studies examine individual images, didactic manuals and illustrated scientific monographs, using the theoretical and methodological models already identified.

Chapter one, "Feminist Critiques of Science and Medicine," is devoted to feminist work from Science and Technology Studies which encompasses both historical examinations of the role of science and medicine in delimiting difference, and challenges to existing conceptions of what constitutes objectivity in science. An overview of the methods used by scholars concerned with the historical interactions between dominant

scientific practice and non-dominant groups, including, but not limited to, women, is instructive. Outlining the pitfalls which plagued early work in the field, such an overview also elucidates the more productive approaches. Although the studies under consideration are not primarily concerned with photography (or any kind of visual representation) they provide a model for understanding that difference is socially constructed. This model provides the grounds for examining how difference has been constructed visually in clinical images. Beyond considering how difference has been defined, theoretical work in STS has gone further to question the adequacy of current concepts of objectivity and scientific neutrality which have served as the foundation for many scientific claims about human difference. The possible revisioning of objectivity and neutrality in ways which make them stronger, as advocated by scholars such as Sandra Harding and Donna Haraway, denatures one of the central tools in the construction of oppressive conceptions of difference and allows for interventions into what gender, race, and sexuality mean and have meant in Western culture.

While the first chapter critiques conceptions of objectivity and neutrality that have served as central legitimating concepts for scientific truth, it is only by analogy that similar critiques of objectivity could be used to challenge claims of photographic truth. The second chapter, which is the most directly applicable element of the theoretical framework for the study of clinical images, focusses directly on the nature of photographic representation and critiques of photographic objectivity. Comprised of Marxist and feminist based phototheory and work in cultural studies which extends these by allowing for a more sophisticated reading of some concepts, chapter two, "The Nature of the Medium: Phototheory 1930 to the Present" concerns itself with how and what photography means in culture. The contributions of major figures in the field, including

Walter Benjamin, Susan Sontag, Roland Barthes, Victor Burgin, Allan Sekula, Simon Watney, Jo Spence, Abigail Solomon-Godeau, and John Tagg are considered in a roughly chronological fashion. Although most of them frame their work as a general consideration of photography, interestingly, much of the work they discuss and many of the examples they draw on deal with the representation of the body. This may be because the Marxist and feminist tendencies which inform their scholarship have led them to recognize the high stakes in the depiction of self and other. Because cultural studies addresses these concerns explicitly it proves an essential element of this chapter. However, it is not so much individual essays which examine representations of difference, such as Stuart Hall's "The Whites of Their Eyes," but the model of committed theoretical work which makes cultural studies so useful. The Gramscian reading of Marx in particular allows for the reworking of a number of major concepts, providing further grounds for committed scholarship and artistic practice. As John Berger writes, photography plays a crucial role in ideological struggle, "[h]ence the necessity of our understanding a weapon which we can use and which can be used against us" (Berger 294).

Throughout this text, there is a commitment to the consideration of artistic practice as a means of interrogating the issues raised in the study of the clinical photograph. Some of the most influential phototheorists were also practicing artists who sought to develop a means of working which did more than "apply" theory to art practice. Their groundbreaking work will be introduced in this chapter as an extension of, and complement to, their theoretical work. Attention will be paid to the frustrations and failures in this mode of working, as well as the successes. Subsequently, in chapter eight, their studio work, as well as my own, will be considered at greater length for what it contributes to the examination of the clinical photograph.

While the first two chapters address how the terrains of science and photography have been mapped and remapped, neither really addresses the specific nature of images of the body as a persuasive means of telling a particular story about ourselves or others. To make up for the absence of any significant consideration in the first two chapters of how images of the body function, chapter three, "The Body in Representation," turns specifically to those fields of inquiry in which the exercise of power and the construction of difference through visual representation is addressed. These include: feminist, film, and queer theory as well as art history and cultural studies. Scholars working in these fields have looked at the pleasures and dangers inherent in the representation of the body, as well as the question of what is included under the rubric of "the body in representation." The handful of authors whose area of interest overlaps my own, including Sander Gilman, Griselda Pollack, Jennifer Terry and Thomas Waugh, are a distinct minority and will receive special attention in the next chapter. Generally, scholars concerned with the representation of the body and difference come from a variety of disciplines and limit their work neither to the representation of the body in the sciences, nor to the medium of photography. They draw on images from such diverse practices as fine art production, pornography, advertising, photojournalism, photodocumentary images, snapshots and formal or professional portraiture. This chapter attempts to address where the clinical image might fit into theories of representation.

Chapter four, "The Afterlife of the Clinical Photograph: Early Clinical Images as Source Documents (1849-1920)," is concerned with the study of early clinical photographs. Examples of images of illness and healing exist from the earliest days of photography and by the 1880s clinical photography is a distinct practice, although the first modern images do not really appear until the years between the two world wars,

something that will be be addressed in chapter six. Rather than provide a detailed historical overview of the technical developments which is widely available in histories of photography, this chapter addresses what might be called the afterlife of early clinical images. What happens to early clinical photographs which are not lost or destroyed and continue to exist into the present time? What role do they play in culture now? One important issue is how these images can be useful in historical scholarship. Historians' responses to the problem of incorporating photographic evidence into historical research, specifically in the history of medicine, will be considered. History, like science, is a discipline which is based on method, and this method is not particularly well adapted to visual material, leaving the historians with the uneasy sensation of speculation beyond available data. So, perhaps, it is not surprising that some of the most infamous or prolific users of clinical images are in some way outsiders. Michael Lesy, author of Wisconsin Death Trip would be among the infamous, Sander Gilman, whose background is in literature, is amongst the most prolific. The methods of both will be considered here.

The chapter five, "The Connoisseur and the Collector," also addresses the afterlife of early clinical images, specifically what it means for clinical photographs to be collected, bought and sold. The primary figure amongst such collectors and connoisseurs is Stanley Burns, a retired ophthalmologist, and amateur historian. His efforts to collect, catalogue, publish, and encourage the study of early clinical photographs will be considered in this chapter. Studying his practice is in some ways like taking a guided tour of the afterlife of the clinical photograph. When no longer serving its original function, how does the clinical photograph circulate? How is it understood? Certain tensions mark Burns's project, for example, when the initial desire to collect a body of images is in some ways satisfied, the question of how the collector positions himself arises. In Burns's case, the collector has

ventured from appreciation into scholarship and, then, into collaboration with artist Joel-Peter Witkin. There is also the underlying conflict between the pleasure of the collector and the possibly uncomfortable knowledge that the rare, desirable object finds its genesis in a moment of human suffering.

Chapter six, "Clinical Photography Post-World War Two: The Cultivation of a New Visual Vocabulary" looks at the rise of modern clinical photography as documented in the instructional manuals and professional journals which begin to appear between the wars. Produced in the United States and to a lesser extent, Britain and Canada, the dozen texts and three journals share the common concerns of what constitutes professional practice. One of the major goals of these texts seems to be the advocation of a professional aesthetic. Although reasons such as improved clarity and legibility are given as the basis for the cultivation of a certain look, the aesthetic choices made also serve the function of making amateur practice immediately distinguishable from professional—always a major concern in the drive towards professionalization in any field. Not surprisingly, because aesthetic practices do not arise ex nihilo, there are striking coincidences between the desired professional aesthetic and trends in other areas of visual culture.

Chapter seven, "Defining Difference: The Case of W. H. Sheldon," looks at the role of science and medicine in defining difference and how the clinical image is implicated in this by looking at a case study. As noted, the use of the clinical photograph is perhaps most interesting in cases where the difference which is being represented is something which is not really visible at all. The desire to make visible the invisible is evident in photographic studies of insanity, hysteria, degeneracy, alcoholism, and homosexuality, such as Jean-Martin Charcot's images from the Saltpêtrière, Hugh Diamond's images

from the Wakefield asylum, the eugenic family studies carried out in the United States, and the work of many sexologists in the early twentieth century respectively (see figures 1, 2, 3, 4, and 5). The focus of this chapter is the instructive case of twentieth century American psychologist, William H. Sheldon, who devoted many years to a variety of related projects in a field he defined as "biological humanics." Sheldon was convinced that it was possible to read psychological makeup from physiological characteristics and that photography was an integral part of the success of this project. His efforts to define and delimit normal masculinity relied heavily on the assumed neutrality of the scientific method and of the camera's eye, illustrating the persistence of common sense assumptions about the nature of photography which informed its early use in the sciences. Sheldon's work is particularly interesting in that it shows the interpenetration of cultural values and scientific practice. His projects were mostly initiated in the years during and immediately following the Second World War, and, in at least one case, continued on through the 1980s, even surviving their original author.

A constant thread which runs though this project is the desire to lay the ground work from which one might interrogate or intervene in the more repressive functions of the clinical image, both through scholarship and through visual arts practice. Chapter eight, "Interrogation and Appropriation: The Clinical Image in Visual Art Practice," is given over to the consideration of the latter approach. In my own research, visual practice is an integral element. Studio work based in the historical and theoretical study of clinical photography allows me to manipulate the visual vocabulary of the clinical photograph as a means of questioning the assumptions which that vocabulary reflected and reinforced. In this chapter my own work, as well as that of other artists appropriating elements of clinical photography, will be considered. The other artists whose work will be addressed

are the artist-theorists introduced in chapter two and other artists whose work directly addresses images discussed elsewhere in the text. However, while all of them incorporate elements of the clinical image or the aesthetics associated with it, they differ in that not all of them consider political commitment a necessary third term in the theory/practice nexus. I am interested in the question of what it might mean to engage with clinical photographies in one's visual practice under those circumstances.

Such a commitment on my part, however, has led me to address a number of subjects in my art practice including the role of the patient in the clinical encounter, how the position of "patient" is produced through codified arrangements of objects and bodies, the processes by which individuals may become interpellated as patients and subjects in the discourses of medical science, and the sexualization of bodies in clinical images which have been recuperated as "masterpieces."

In this project I intend to provide the reader/viewer with the theoretical, and methodological tools necessary for the study of the clinical image, while also providing a model for an academic and studio practice which disrupts naturalized, common sense assumptions about how and what photography, science, and the body in representation mean in Western Culture.

Chapter One: Feminist Critiques of Science and Medicine

Appropriate to this project which draws on theoretical work from a number of disciplines, Feminist Science and Technology Studies (STS) is something of a boundary dweller itself. Major figures in the field come from many different disciplines and, in their work, cross the most significant disciplinary divide—the one between the arts and science. Early feminist studies concerned with the role of women as practitioners and as subjects of science and medicine led to more sophisticated critiques of the foundations of the sciences' privileged status as a source of truth. These kinds of projects, including the study of specific incidents where members of non-dominant groups have come into contact with science, as well as critiques of objectivity, provide practical and theoretical models for the study of clinical images, especially those which depict gender, or other difference.

Any study of science, however, which is not simply a history of great men and significant discoveries has been a problematic proposition. C. P. Snow's "two cultures" model, which positions the humanities and the sciences as two mutually exclusive spheres of inquiry, has long had the aura of a natural division, with the result that there is not an extensive tradition of cross-disciplinary scholarship or critique. Furthermore, because of science's culture of no culture (Rose 2), there has been a lengthy history of rendering illegitimate any critiques which originate outside the discipline, and do not share its language or assumptions. The social has been regarded as a contaminant to be expunged through scientific method. It is only since the appearance of Thomas Kuhn's concept of paradigm shift that there have been widely accepted intellectual grounds for the

recognition that the social plays any role at all in the practices and discourses of science. Although this has opened up the possibility of critique, the prestige of science as a source of objective truth which is only accessible from within the practices of science, remains largely undiminished.

Consider the resources expended on the Human Genome Project which is popularly seen as having the power to unlock the secrets of human nature (Lewontin). The media coverage of this project reflects all of Western Culture's fondest hopes for the pursuit of science—that it will tell us the truth about ourselves, while amplifying our powers to modify that truth to suit our interests. It is hard to imagine a project from outside the domain of science which could make similar claims to the unveiling of the secrets of human life, and even more difficult to imagine one which would garner the same level of funding, international cooperation and media attention. Although debate over the ethics of the Human Genome project exists, such debate does not affect the direction of research practice. Instead it seems that ethics is charged with dealing with the aftermath and managing such truths as are revealed by science. It is clear that the sciences have much greater social power as truth tellers than philosophy or ethics. Imagine how different current practice would be if the reverse were the case. As it is, if even fields like ethics which take science as their proper object have little authority to intervene in its practice, other disciplines in the humanities and arts have even less.

When, in this climate, scholars of literature and film, art historians, and philosophers have jumped the gap to speak about the sciences, and some scientists, notably Evelyn Fox Keller, have ventured out of their own domain by speaking about it critically in the context of feminism, the results have sometimes been referred to as "intellectually promiscuous" (Jordanova, Introduction 16). These are hard words, but

significant, if one considers cultural theorist Andrew Ross's point that if there was nothing at stake in maintaining the illusion of two cultures, there would be nothing to be gained by such fierce defense of the borders (Science Wars 183). In Feminist Science and Technology Studies the stakes are how science and gender are understood in culture, and how the former is influential in shaping the latter. As a result of critical attention to historical and contemporary interactions between the culture and practice of science, and role of women as practitioners or objects of study, both science and gender are now better understood as culturally determined and temporally specific rather than universal and unchanging. The field of feminist STS has also provided a model for the examination of the relationships between other non-dominant groups and science and medicine, resulting in an expansion of the project. For women and minorities, STS's challenge to the two cultures model allows for interventions in the restrictive and repressive definitions of otherness which have drawn on the language and practices of science for their cultural authority. For the sciences, the status quo, the continuation of that unquestioned authority, is at stake. Efforts to identify the sources of this authority and power have led to a critique of the relationship between the ideals of objectivity and neutrality and actual scientific practice, as will be considered below.

The earliest work in STS, however, had yet to concern itself extensively with the sources of scientific authority. One of the first questions addressed was simply, "Who does science?" (Kohlstedt, Gregory and Longino 5). The answer, if one turned to histories of science, popular culture, or the classroom, was, "men." It was within this context that these early studies considered the traditional exclusion of women from the practices of science and looked back to discover "great ladies" (Apple, Introduction xii) whose contributions had been overlooked. Similar projects were being undertaken by feminists in

other fields at the same time. In literature and art history, this process of recuperating previously undervalued women writers and artists was being conducted as an answer to the questions of "Why there was no female Shakespeare, or no great women artists?" which were then being asked in university classrooms (Pollock, Old Mistresses; Jordanova, Sexual Visions 45).

This parallel with developments in other disciplines is one reason why this search for women practitioners might have been among the first avenues pursued by feminist scholars who were turning their attention to the sciences. Another reason, posited by Sandra Harding is that it did not require a significant recognition of the role of the social in the practice of science. Existing as it did at the level of the individual, it did not necessarily entail the inclusion of a more global examination of the role of gender in science. Essentially, it was a project which could proceed along empirical lines, measuring the division of labour by identifying where women were and where they were not (Pattalucci).

The process of recuperating lost heroines, although inspiring initially, later proved to be a limited enterprise. It was criticized as being not especially intellectually challenging and as providing no opportunity for political analysis (Fausto-Sterling and English 6). However, the discovery of such limitations at a later stage should not be seen as rendering this early work unimportant. Writing about political activism, cultural theorist Stuart Hall points out that a first phase dedicated to recuperatory processes, such as the one outlined above, serves the important functions of building community and solidifying identity, before a second phase which places a greater emphasis on analysis can begin in earnest (Stein 345).

Before beginning this analysis however, there was a second aspect of this first

phase of the feminist study of science and medicine. The question "Who does science?" has a sister question: "To whom is science done?" It also is probable that these questions seemed like an obvious starting point in historical study because they were also important questions in the contemporary culture of the late 1960s and 1970s. Feminists were asking why there were fewer women in positions of authority and drawing attention to contemporary abuses of clinical power including the lack of patient information concerning the birth control pill, and the continuing use of diethylstilbestrol (DES), the first synthetic estrogen, as emergency contraception and to prevent miscarriages despite evidence of its carcinogenic effects. In fact, Our Bodies, Ourselves which encouraged women to understand their bodies and make informed decisions about medical care can be considered one of the earliest feminist projects in STS (Lykke 1).

As a result of this interest in who was the object of science, the history of medicine, which had largely been the history of great scientists and doctors, began to address the history of the patient (Woodward and Richards 41, Moscucci). This emphasis on writing the history of the patient later provides a foundation for looking at the history of how patients are represented in clinical photography. Initially, however, the recognition that women had often been the subjects of scientific, medical research, led to texts which delineated the abuses resulting from the unequal relationship between the male medical practitioners and female patients (Sheehan). This model, which presented the patient as victim, has been described as reading the clinical encounter as "patriarchy writ small" (Roy 177). Yannick Ripa's Women and Madness: The Incarceration of Women in Nineteenth Century France, presents a devastating picture of non-conforming women being disciplined and disenfranchised through incarceration in the Saltpêtrière. Edward Shorter's popular A History of Women's Bodies: A Social History of Women's

Encounter with Health, Ill-Health and Medicine also emphasizes women's suffering, although it has been described as being a work "of dubious scholarly reliability due to extensive speculation beyond data" (Clarke, "Women's Health" 17). These tabulations of abuse by the medical and scientific establishment are undeniably disturbing, and one can imagine them functioning as an element of consciousness raising. Delineation of past wrongs can be as powerful as the discovery of unsung heroines in solidifying group identity.

An example of the use of historical study as a tool in contemporary activism is Jeffrey Mousaieff's A Dark Science: Women Sexuality and Psychiatry in the Nineteenth Century, published in 1986. Focussing extensively on surgical gynecology undertaken (often without benefit of anesthetic or antiseptic) in the name of the amelioration of psychiatric conditions, it makes for horrifying reading. However, reading Mousaieff's account at a time when surgical practice has changed sufficiently that it is hardly recognizable as the same activity, one wonders, what kind of activism might such a litany of horrors incite? Alone, the text does not make this clear, leaving the reader with a sense of revulsion directed vaguely at historical medical practice, and possibly a sense of relief that current surgical and psychiatric practice are what they are. It is the introduction to the text, written by Mousaieff's partner and anti-pornography activist, Catherine McKinnon, which frames Mousaieff's book in relation to contemporary political activism. McKinnon explicitly locates these nineteenth century procedures as being on a direct continuum with other kinds of violence against women which exist in contemporary society. She is attempting to channel the horror and disgust which descriptions of unsophisticated clinical procedures occasion, into outrage at the existence of what she considers parallel practices in the America of the 1980s—sexual abuse, domestic violence,

and pornography.

However, just as the feminist anti-pornography campaign has been challenged by pro-sex feminists who insist that the anti-porn camp has neglected the possibility of female agency and sexual pleasure, these historical accounts which position women as victims of a male-dominated science are also read as denying female agency. In Rima Apple's edited collection, Women, Health and Medicine in America: A Historical Handbook, nearly all of the contributors explicitly reject the "victim model" seeing it as one-dimensional, with nothing of the complexity of real social interaction. Furthermore, although accounts of past injustices might serve to forge a kind of bond between members of a particular group, the continued characterization of members of that group as consistently weaker, and inactive in the face of persecution, can have demoralizing effects.

Among the reasons given for rejecting the victimization model, some are more convincing than others. For example, Judith Roy's insightful call for a more complex model of the exercise of power in modern therapeutics is in some ways diminished by her assertion that one should reject the model of women as victimized by the medical system because men were also subjected to invasive and painful clinical treatments. The suggestion that men's and women's experiences as subjects of medical authority were parallel neglects the policing of feminine behaviour documented in many other sources (Tomes; Wailoo; Russett) and the mutually constitutive natures of gender and science. Discovery of the suffering of members of a dominant group does not render insignificant the suffering of women and minorities. More productive than arguing that the existence of male victims disproves the thesis that women were subject to the disciplinary practices of clinical medicine, is the suggestion that women themselves were participants in the discourses of health and illness, occasionally as doctors, but more often as patients,

family members or friends. Because resistance as well as collusion can be read into this participation, this provides the basis for a more specific account of women's interactions with science and medicine than does the construction of them as passive victims (Theriot 148; Apple, Introduction xv). A simplistic reading of all players as belonging either to the oppressors' team or the victims' team has been largely abandoned as being about as complex or as accurate as understanding contemporary feminism as being a giant game of "girls against the boys."

The examination of how power was or is exercised in clinical settings, and the practices by which femininity was defined and policed by scientific medicine bring into focus the fact that science and medicine do not exist outside of culture. Social values influence the attitudes and behaviours of researchers and subjects. One of the ways in which this is evident are the parallels in how diverse disenfranchised groups have been defined in similar, even overlapping, fashions (Harsin). In nineteenth and twentieth century scientific texts, comparisons are frequently made between women and racial others. Links are made between blacks, women, children, Jews, homosexuals, the working class, prostitutes, the mentally ill, and the disabled. In some cases, the overlapping of the traits supposed to characterize individuals in these devalued groups was used to reinforce assumptions about the inferiority of both groups (Stepan 361; Braidotti 141). In other cases, the categories themselves were mutually constituting (Somerville 38). Ronald Takaki draws attention to the example of how the "cult of true (white) womanhood and the myth of the rapacious, hypersexual black male do not operate in isolation" (201).

The culturally embedded nature of scientific practice becomes even clearer when one asks why, when science can choose to study anything, has it chosen to expend its energies searching for evidence that women are inferior, that whites and non-whites are

separate species or that homosexuality can be located in the body? A number of scholars have postulated that such studies have taken place at particular historical moments as a response to anxieties about difference in the larger culture. Cynthia Eagle Russett ties Victorian efforts to prove female inferiority to tensions arising from the publication of Darwin's Origins of Species and its challenge to the perceived natural order. If it could be proved that women, along with children and so-called lesser races, were stuck at an early stage of recapitulation then they could "serve as a buffer between Victorian gentlemen and brutes" (11). Louise Michele Newman links scientific reassessment of innate gender difference to the industrial revolution (xxiii). Jennifer Terry, noting that scientific studies of homosexuality are much more prevalent in some periods than others, asks what cultural anxieties might have fueled them. She makes the case that anxieties about such disparate phenomena as women's changing roles and demands for enfranchisement at the beginning of the twentieth century and fears of communism in the 1950s could have contributed to a climate in which searching for invisible, internal "others" seemed a desirable and profitable scientific enterprise (Terry, "Seductive" 274). Contemporary studies have also been identified as possibly finding their genesis in the AIDS crisis. In the early 1990s Barbara Ehrenreich rhetorically asked why studying innate gender difference was "sexy" and well-funded precisely at a moment when there existed a coherent feminist challenge to dominant power structures (Fausto-Sterling, Myths 259). By asking why one would choose to look for innate difference, one begins to question the neutrality of the process. At a very basic level, the non-neutrality of science is evident even in the fact that some areas of research are seen as intrinsically more interesting and worthy of further study than others (Irigary in Mura 25).

One of the things that makes the persistence of the scientific search for innate

difference remarkable is its continuing failure to deliver. Anne Fausto-Sterling notes that, despite initial promise, almost every study which has linked physical difference to social inequality has, through further scientific examination, proved to be "bogus." However, she notes wryly that such is the desire for the legible body that "hope springs eternal" (Myths 260). This continued hope in the absence of evidence underlines the contention of Fausto-Sterling and others that there is no such thing as apolitical science (Myths 11).

One of the reasons why it is important to study the ways in which cultural values affect the direction of scientific study is because, just as culture influences science, the reverse is also true—science influences culture. Neither is it only contemporary scientific inquiry which shapes our ideas about what is normal or natural. The studies of the past also contribute to conceptions of difference in contemporary culture, or, as a Gramscian Marxist might put it, old ideas in the form of common sense persist in new articulations.

This recognition of the role of the cultural at the very beginning of scientific inquiry, "What shall we study?", is distinctly at odds with classic definitions of science which did not recognize the possibility that social or cultural elements could influence the direction of scientific study. Much of the definitional project of what counts as science has been pursued through binary processes, where x is defined as "not y." Following this model, science has been framed as much in terms of what it is not, as in terms of what it is. Science is not art. Science is not culture. Because this process tends to valorize one term in the equation at the expense of the other, there has been an assumption of the greater intrinsic value of one kind of knowing over another. This means that discussions of what separates sciences from non-science, are effectively discussions about classifying different bodies of knowledge as being inherently more trustworthy or valuable than others. The power of the sciences has rested on the claim that scientific knowledge was

different or separate from other kinds of knowing about the world and, as such, more reliable. In all traditional accounts this difference rests on the ideals of objectivity and neutrality as they find expression in the scientific method.

However, having looked at the relatively straightforward questions of "Who does science?" and "Who is science done to?" it has become apparent that the ideal of science as a value-free, objective exercise has not necessarily been reflected in practice.

There are two ways of interpreting historical studies which reveal biased, sexist or racist science. When faced with evidence of historical scientific practices which had unequivocally negative effects, one response is to assert that these effects were the result of practitioners who had failed to follow the scientific method or who were insufficiently objective or neutral—that, in fact, they were not good scientists and what was happening was not science at all. This is a very comfortable position from which to critique past mistakes. It calls for no changes within the culture and practice of science itself, suggesting that if everyone just followed the rules, was more neutral, and more objective, everything would be fine. There is even the possible corollary that everything is much better now, a conclusion that a reader of Mousaieff's text might be tempted to draw if he or she had skipped McKinnon's introduction. As with the search for forgotten "great ladies" of science noted above, this historical emphasis allows one to locate oppressive or inegalitarian practices safely within the realm of the historical. Oppressive practices are regarded as simply the result of a failure to follow the "rules."

Feminists and others argue against this interpretation, that these past practices were not the failings of individual researchers, but, rather, the results of existing definitions of science, social arrangements and common sense assumptions about the disparate characteristics of particular groups in society.

If projects that have been understood as science have deep cultural biases at their core, this suggests that classical definitions of science are in some ways inadequate. An example of one such project is the Tuskegee Syphilis Experiment. Originally undertaken in 1931, infected, poor, black men were left untreated deliberately so as to follow the "natural" progress of the disease until the story broke in the press in 1973. The findings had been periodically published in respected journals and some of the researchers have continued defending their work to the present day as being entirely unproblematic (Jones Bad Blood). The experiment had been accepted as science by professionals in the field.

It could be argued that the central problem of the Tuskegee Experiment was a failure to follow the scientific method, especially when it was discovered that there was no formal written protocol for the experiment. However, if the Tuskegee Experiment is interpreted as bad science only because it lacked good method, this suggests that if the experiment had been methodologically sound there would have been no problems with it. A strict definition of good science as that which follows the scientific method neglects the possibility that the scientific method can be followed precisely and still have oppressive results. If good science only requires strict adherence to method, then good science can have the same negative results as the Tuskegee Experiment. If good science only requires strict adherence to method, then no one need ask the difficult questions raised above, such as why a search for embodied difference should be a priority.

One way of dealing with this problem of what is good science is to examine what counts as science, how it is defined. Rather than look at the well-defended borders between arts and science, it is probably most useful to look at how this question has played out in ambiguous cases. This gray area is not, however, between science and art. Rather it is between what might be termed science and non-science or pseudoscience.

Asking what divides science from non-science in practice can result in a clearer understanding of what science is in theory. More importantly, an examination of how the field of science has been constructed and its borders defended can provide insights into the power science and medicine possess to tell us the truth about the world and ourselves. Another advantage of addressing these big questions of "What counts as science?" is that it moves feminist scholarship beyond looking for pioneers and victims which, though useful, is quite a limited domain.

Science critics have examined the question of what counts as science from several points of view. The first has to do with the stories science tells about itself and how these are reflected (or not) in the actual practices of science. Chemist Henry Bauer's Scientific Literacy and the Myth of the Scientific Method is devoted to defining what counts as science and what constitutes good science through observations of how science really works on the ground, rather than in theory. The second approach looks critically at the stories science tells about itself, asks if these ideals are even possible and speculates on means of reformulating such concepts as neutrality and objectivity to promote less authoritarian or binary modes of thinking. Both approaches look at historical and contemporary scientific and medical practice, but with an eye to the future. They are looking for how a clearer understanding of what science is can result in practices which better serve the ideals of the discipline.

Careful to position himself as a practitioner and proponent of science, Bauer seems intent on untangling scientific ideals from scientific practice and translating critiques from Science and Technology Studies into a form which is more palatable for science students and others who are invested in the project. While other critiques describe at length abuses that have occurred in the name of science, Bauer refers to them only

obliquely, carefully avoiding potentially inflammatory material. This could be seen as a maneuver to preserve the reader's goodwill until he presents his much more challenging assertion that the scientific method is a myth. Rather than arguing from specific cases where the method has failed, which could be open to interpretation or argument, Bauer looks at the project of science as a whole. He argues that, while the scientific method may represent an ideal, it should not be understood to precisely represent what happens when people actually do science. Bauer suggests that there are negative consequences of believing that all endeavors in science proceed according to the scientific method and are therefore inherently neutral. He states that:

> [t]he unqualified myth encourages hubris. One learns that science is objective. One learns that scientists are trained to be objective and to be skillful in the use of the scientific method. Naturally, then, society learns to admire scientists as much as science itself, as people who are able to be objective; and scientists themselves, of course, are not immune to that chain of inference. So they may be led to think of themselves as more able to be impartial and free from conflict of interest than other people [...]. The myth of the scientific method, then, encourages the laity to have an unrealistic view of scientists and therefore also to have unrealistic expectations of them and science; and it encourages scientists themselves to be unrealistic about themselves and about science and to neglect the importance of cultivating consciously ethical behavior. (40)

Robert Proctor and other scholars of the Holocaust have traced exactly this rhetoric of science as incontrovertibly objective in their studies of Nazi medical and scientific research. Many of the racial theorists or hygienists did not join the party until very late, seeing their work as apolitical, pure science (Proctor, Nazi Medicine 351). Clearly, the scientific method in and of itself does not provide an ethical framework for the use of human subjects. That the ideal of objectivity can coincide with incontestably partial practice underlines the dangers of the unqualified myth. Evelyn Fox Keller, sometimes referred to as the founding mother of feminist critiques of science (Lykke 3), explains that critics of science work to uncover "the personal investment scientists make in impersonality" (Reflections 277).

To demonstrate the insufficiency of considering the presence or absence of the scientific method as the dividing line between science and pseudoscience, consider the case of the Loch Ness Monster. If the presence of the scientific method is the only means of drawing the line then we must assume that if a search for Nessie adhered strictly to good method it would be considered good science. We know this is not the case. If the image of the methodologically sound Loch Ness study seems fanciful, then consider the case of Michel Gauquelin's study of the position of Mars at the moment of the birth of elite athletes. This study did not deviate from the scientific method and showed all the characteristics of what good science should be, but his work was still considered outside of the proper domain of scientific inquiry (Bauer 60). This example shows that adherence to the scientific method will not automatically result in one's studies being counted as science. So, if it is not adherence to method alone, what makes science science? As a corrective to the myth of scientific method, Bauer suggests a model for understanding "What counts as science?" which describes science as a collective practice, or, in other

words, as a culture.

Traditional accounts of the rise of scientific thought mark the seventeenth century as the moment when the advent of the scientific method transformed idiosyncratic practice into recognizable science. Bauer points to a separate development—the rise in the publication of results in journals which allowed for the exchange of ideas—as being central to the great advances made by this new discipline. He argues that the birth of this culture of inquiry where scientists are sharing their results produces what Michael Polyani calls the jigsaw effect. Explaining that the pursuit of science is not a kind of labour, like shelling peas, where ten labourers working separately get exactly the same results as ten labourers working within sight of each other, he suggests that science is more like working on a jigsaw puzzle (Bauer 44). If you divide a puzzle up between ten groups in ten separate rooms, progress is much slower than if the ten groups work within sight of each other and can make sense of their own work in relation to everyone else's. The mechanisms of peer review, publication and exchange, define what is and is not within the practice of normal science. In this view, pseudoscience is that which is practiced outside of the culture of puzzling.

One advantage of the puzzling model described by Bauer is that maximally accurate science is not the result of a method which may be followed by a fallible human working in isolation. In the puzzling model, the most accurate, reliable science is science which has been reviewed and replicated and examined and reexamined. Thus, the social power of science is not based on the shaky grounds that anything that follows the scientific method is equally reliable, but on a process which involves a community committed to checking and rechecking results.

However, though Bauer sees this metaphor as a much more accurate description of

what actually happens when people do science, than the myth of the scientific method, he recognizes that it does not prevent abuse. In fact, the metaphor of puzzling also explains how whole scientific communities can regard a body of work as rigorous and objective, when later reviewers find obvious errors in the method or published data. What is considered good science is determined by the community of puzzlers at a given time. The discovery of bad method or observation in this view could be considered less a result of individual failings than indicative of widely held cultural assumptions current at the time of the project. Eugenics studies are an example of how the scientific community at large can adopt a set of assumptions which it later rejects wholesale. Using the same methods which were considered perfectly acceptable a couple of generations ago, contemporary researchers are branded outsiders. The position of authors seeking to prove innate racial difference provides an excellent example of how what counts as science changes over time. Nineteenth century anthropologist Louis Agassiz was highly respected and built a career on establishing that blacks were a separate species from whites. Contemporary University of Western Ontario professor Philippe Rushton, though protected by ideals of academic freedom, is barred from teaching for propounding similar essentialist views. Furthermore, unable to find a peer reviewed venue for the publication of his studies, he is reduced to self-publishing abridged versions of his work which he sends to faculty in other Canadian universities, hoping for a sympathetic audience.[1]

It is not a very large step to move from looking at science as a culture to looking at science as a practice which is in culture and which is affected by currents in the larger world in which the scientists live and work. As noted above, this can lead researchers to consider what social conditions might have prompted certain scientific projects. Using the example of Samuel George Morton's crainiometry studies, one could suggest that the

[1] I received one when teaching in Concordia's Sociology Department in 2000.

social conditions of his day (specifically the existence of slavery) might have prompted his studies of differential intelligence (Gould).

However, one could go further, as does Stephen Jay Gould, to look to how social conditions might have affected what counted as good research in the culture of science at that moment. Gould uses this case to demonstrate that what counts as science is temporally specific and influenced by the larger culture. Morton, hailed as the "objectivist of his age," collected human skulls from different racial and ethnic groups and then measured them in order to prove that non-whites had smaller brains and were thus less intelligent. Gould, looking back on this project, identified a number of serious flaws in the work in terms of methods and techniques of measurement, and Morton's statistical analysis of his findings. What is interesting, however, is that they were by no means hidden. Morton published not only his method, but all of his results. Anyone looking critically at those at any point could have identified the same errors, but no one did. The question is, how did this happen? Gould suggests a number of reasons for this, but one of the primary ones is that Morton's results, which showed that Whites had the largest brains followed by Native Americans and Blacks, fit precisely with what any educated person already knew. Gould points out that this common sense knowledge was so pervasive that even abolitionists openly discussed the intellectual inferiority of blacks (84). Here is a case where assumptions in the larger culture allowed flawed results to be widely regarded as good science.

Gould points out quite clearly that any failures of objectivity or method in Morton's practice are not necessarily the result of the conscious "cheating" or bad intentions (102). Good intentions are perfectly compatible with racist scientific research and science with racist consequences (Harding, "Racial" Economy 83). If Morton were

consciously manipulating his results, he probably would not have published everything and left the evidence there for anyone who cared to look twice. Fudging and finagling of results can arise unconsciously from good intentions, just as easily as from bad. It seems that no scientist regards him or herself as practicing science in a biased or non-neutral manner. Anthropologists observing behavior in contemporary lab work have noted that despite the fact that everyone believed themselves to be behaving in an objective, neutral fashion, they were in fact behaving more like human beings, making intuitive leaps, and failing to identify prejudices, assumptions and blind spots (Latour). There exists a gap between ideals of scientific rationality and laboratory practice.

If scientists do not necessarily proceed by following the scientific method at all times, and if one can follow the method and still be seen to be practicing pseudoscience, then Bauer's reference to the scientific method as a myth seems accurate.

The power of science to define can be checked by this recognition of science as a culture which operates within the larger culture. A further check to unrealistic expectations of the power of science to tell us the truth is the recognition that there are a multitude of tangentially linked practices which count as science. Bauer points out that we are in the habit of referring to all of science as a unified whole when there are in fact different kinds of science. What counts as objective observation or proof in one field may be inadequate in another field. Within science as a whole there are disagreements about what constitutes good science or what counts as evidence. Theoretical physicists, microbiologists, primatologists, and chemical spectroscopists are all practicing science, but what counts as science varies from field to field (Bauer 31). This is without even considering fields like the social sciences which draw on science for their methodological authority but lack the prestige of the so-called hard sciences.

Furthermore, Bauer points out that all science is not equally reliable. He divides what we call science into two camps which he refers to as textbook science and frontier science. Textbook science is that, which having been tested and retested, is largely reliable and unlikely to suffer any great change outside of a complete paradigm shift. Cutting edge or frontier science is not the same kind of pursuit as established textbook science. Some writers, including John Zinman, suggest that as little as ten percent of frontier science will stand the test of time (Bauer 48). However, because these fields are new, there are large, exciting discoveries to be made, whereas, within textbook science, progress tends to be of a more pedestrian nature—filling in the gaps. Frontier science is front page science, it is sensational. Notable for my project is the fact that frontier science is the field where social issues are biologized. Discovering the spectra of a previously uncharted molecule never makes the front page of the newspaper, while we are consistently promised cures for cancer, new proof of life in outer space and evidence of innate difference. As one knows from experience, most of these front page stories come to nothing. However, because we are in the habit of speaking of them all as "science" no distinction is made between one body of highly reliable and another body of highly speculative knowledge.[2]

Being concerned with what actually happens in the practice of science, Bauer cautions against hubris and unrealistic expectations. His text is largely descriptive, concerned with telling us what actually happens. The next step is the call for change within the sciences made by feminists and others working in Science and Technology Studies. While Bauer suggests understanding the scientific method as an ideal rather than a

[2] In fact, often news stories which purport to tell us about ourselves make claims way beyond the scope of the original research. For example, a story in Newsweek claimed that mothers deal with stress better than women who had no children. This was accompanied by a photo of a harassed looking women with a baby, a bag of groceries and a cell phone. However, upon reading the article, it became clear after several paragraphs that this finding was in fact based on one study done on female rats. No mention was made of the fact that it is scientifically unfounded to assume that the experiences of maternity and stress are precisely the same in rats and human beings.

description of practice and recognizing that "science" describes a range of activities, other scholars have looked to a revisioning of the concepts which act as the foundation for the scientific method. The concepts in themselves are valuable. As Bauer points out, just because the ideal of scientific method is not descriptive of what happens at all times in scientific practice, that does not mean that the ideal is necessarily without merit. "That human beings cannot by nature be entirely objective does not render objectivity an unworthy ideal" (Bauer 39). Having ideals encourages people to behave in a certain fashion Bauer notes, drawing attention to the fact that while all members of a religious order may not follow their vows of poverty, chastity and obedience at all times, they are certainly more likely to live closer to those ideals than other groups who have made no such promises (39).

However, the disjunction between theory and practice has led many to suggest that it is necessary to cultivate a theory which reflects what really does happen. While Bauer has focussed on the myth of scientific method, other critics have focussed on the ideals of objectivity and neutrality which serve as the myth's foundations. The critique of these concepts serves the dual goals of challenging the unparalleled authority of the natural sciences in the twentieth century and of making theory more reflective of practice.

Faced with scientific proof of their inferiority based on "objective" observations, it is not surprising that there has been a temptation for women and minorities to reject outright the possibility of scientific objectivity. This is evident in some works which call for an essentially feminine or intuitive way of knowing. This tendency towards a complete rejection of the traditional sciences is tempered by a recognition of the negative effects such a move might have, particularly the resulting slide into relativism. It has been noted that "[i]ntellectual dangers reside in viewing science as pure social product—science

then dissolves into ideology and objectivity loses all meaning" (Sperling in Keller, Reflections 386). Furthermore, rejecting science wholesale results in an inability to intervene in the process. Critiques from outside of science, as noted above, are not paid great attention. This is particularly the case for those which reject all the premises upon which science is based. Also, if all of science is understood as being no different from any other kinds of knowing about the world, then access to any of potentially positive or emancipatory effects of modern science is canceled. Studies which "discover" that women and minorities are not inherently inferior have a considerable social power which it would be foolish to reject out of hand. As an example, the self-defined lesbian subjects of a 1930s New York study of sex variants recognized the power of science to define and hoped that their participation would result in science proving that lesbianism was a natural variation rather than an illness (Terry, An American). Sandra Harding points out that scientists have been "the most powerful legitimators and most devastating critics of scientific racism" ("Racial" Economy 82). Loathe to reject the possibilities of science, but at the same time wary, feminist and other scholars of STS have set out to reinvent the tools used to build science's house.

One of the central aspects of the dominant constructions of objectivity and neutrality is that science, if practiced properly according to those ideals, is somehow separate from the rest of society. This is especially the case in fields of inquiry that do not have human beings as their immediate object. While it might be obvious that studies of sexuality or gender have immediate consequences for people, it is less so when one turns to fields such as astronomy or physics. Roberta Mura in Searching for Subjectivity addresses this issue by attempting to answer the question: "What does a feminist approach mean in sciences which don't deal explicitly with human beings?" (1). She

suggests that the simplest answer to this is, that no matter what their official object is, all sciences deal with humans in the final instance (Mura 57). One example of this are questions about the practical applications of "pure" sciences raised by environmental groups. More fundamentally, in the hierarchy of scientific practice, the "pure" sciences are held up as a model for the human sciences, so the ideals of what constitutes good practice in math and physics come to inform sciences that do have humans as their immediate object. The other way that sciences which do not overtly deal with women and men come to reinforce gender stereotypes, or have other effects of which feminists are critical, is through their use of language.

The impossibility of extricating science from culture becomes clear in studies of the use of language in scientific practice. Scientific practice which is otherwise not guilty of omitting, or producing disparaging representations of, women, their work, or their concerns, can use gendered language in which sexist and heterosexist prejudices are projected onto plants, animals, and inanimate objects by authors who write of unveiling and penetrating the secrets of a feminized Nature.[3] The myth of the coy female, the use of charged language like "rape" to describe behaviours in fish and insects, or even the sexualization of positive and negative charges in chemical reactions all provide evidence of how impossible it is to use language in a perfectly neutral, extracultural way. Emily Martin's case study "The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male and Female Roles" looks at how sex cells have been given gendered personalities in accounts of human reproduction. She states that she wants to wake up the sleeping metaphors in scientific language. The effects of these gendered, or even sexist, descriptions extending even to our cells, further serves to naturalize common

[3] Donna Haraway, Evelyn Fox Keller, Brian Easlea, Anne Fausto-Sterling, Gillian Beer, Jan Harding, and Ludmilla Jordanova all note this tendency and provide examples.

sense prejudices about men and women, even their sex cells are aggressive or passive. It is not just the gendered nature of the personalities ascribed to cells to which Martin objects—it is the fact that we are giving cells personalities in the first place.

Critiques of science of all types, have been met with some hostility. Bauer, for example, is very careful to position himself as someone who understands science as a worthwhile pursuit and points out that he himself is a chemist. In response to the hostility that has met descriptions of science as "just another human activity," a number of science critics have made concerted efforts to explain that what they are doing is not a kind of "science-bashing" driven by an irrational destructiveness. Sandra Harding in the introduction to The Racial Economy of Science: Toward a Democratic Future, identifies the critiques in the collection as being calls for better science, rather than for an abolition of the field (2). She sees her work as filling a gap in elite science education which fails to incorporate the idea that nature as an object of knowledge is always cultural.

Anne Fausto-Sterling and Lydia English describe efforts to develop sophisticated critiques of the scientific model of objectivity as attempts to recognize the positive aspects of "objective" western science while looking at the deep prejudice and lack of objectivity inherent in the project. In pursuit of this, Evelyn Fox Keller, Sandra Harding and Donna Haraway all attempt to reconceptualise both knowledge and objectivity in ways which liberate them from particular gender ideologies. This is a new kind of scientific literacy which asks that we should have some understanding of the workings of science within culture, rather than a set of facts which, if committed to memory, might make one scientifically literate (Bauer).

Keller begins with a rejection of objectivity as it is commonly understood, referring to it as "static objectivity"—an approach which begins with severance of subject

and object. She suggests that if one is to define objectivity as the pursuit of a maximally authentic and, hence, maximally reliable, understanding of the world around oneself, then the static objectivity of contemporary scientific practice is not objective at all. Rather than assuming an automatic or natural separation of self from other, she sees the struggle to separate self from other as a source of insight. She calls for a kind of "dynamic objectivity" which incorporates subjective experience (Reflections 277).

Harding similarly suggests that science is not living up to its own ideals, pointing out that existing methods are not necessarily strong enough to identify and eliminate distorting social interests and values from the results of research. She sees the development of "strong method" and "strong objectivity" which are capable of achieving these ends as necessary. Strong objectivity would take into account the unexamined common sense assumptions or culture-wide beliefs that, when not critically examined, end up influencing hypotheses and research. Harding, understanding that the social must be accounted for in the fashioning of strong objectivity, is informed by standpoint theory (Harding, "Rethinking"). The idea that the observer's position affects the observed object is most famously explained in relation to the institution of slavery. While the facts of the institution remain the same, a slave owner's objective description of the "facts" of the case would be strikingly different from the descriptions proffered by those enslaved (Harding, "Racial" Economy 22). In the past, science has assumed that it was possible to observe as a neutral outsider—a position of maximal objectivity somewhere outside of culture. However, if science is part of culture, as Science and Technology Studies suggests, then there is no outsider position which is unaffected by the values or norms of the society. Previous versions of scientific objectivity positioned not only the observer outside of culture, but also the observed as being outside of culture. "Pure nature" was

seen as the natural object of the sciences, existing outside of culture and just waiting to be discovered. Harding suggests there is no such thing. That how the observer approaches a bit of nature, whether it is with respect, curiosity, violence, or degradation, affects how it is understood ("Racial" Economy 15).

Traditional conceptions of objectivity have rested on the idea that one can separate subject from object. One of the reasons why this is problematic is that it reinforces the illusion of "not me" or otherness about the subject of study. The same objectifying assumption that the other is "not me" and "not like me" lies at the heart of colonialist, racist, sexist or heterosexist scientific practice. Harding's strong objectivity works to take into account the simple facts that scientists have bodies and biases, their work is mediated through language, and representation, and affected by their subject positions. Donna Haraway describes this kind of knowing as situated knowledge—a new kind of objectivity which encompasses partial, embodied, and localized vision. She argues for a doctrine and practice of objectivity that privileges "contestation, deconstruction, passionate construction, webbed connection and hope for transformation" (Hanssen-Gram 92). Like Keller, she also addresses the split between subject and object, suggesting that this is an artificial dichotomy which might be healed through the revisioning of objectivity.

Central to all these approaches is the understanding that "the dream of objectivity and absolute, universal and comprehensive truth is only a dream" (Keller and Longino 9)—that objectivity is the product of a particular cultural and historical moment. The rejection of dominant definitions of objectivity also informs the next chapter on photographic theory. The juxtaposition of the critiques of scientific medicine and photographic technologies is not capricious, as there is an intimate historical relationship

between them. Ludmilla Jordanova has noted that medicine "has acquired the legitimacy to see and intervene in what is construed as most private. It has long been a site of feminist struggle. It took on photographic techniques with enthusiasm for the supposedly unmediated vision they gave access to" (Jordanova, Public Bodies ix). This myth of photographic objectivity, or "unmediated vision," like that of the scientific method, has been a powerful tool in the definition of difference. Speaking of the entwined history of these two discourses, Jordanova writes, that "[i]t has generated metaphors of unusual potency" (ix). While work in Science and Technology Studies provides insight into one constitutive element of these metaphors, it is necessary to consider critiques of photographic objectivity in order to address the other half of the equation.

Chapter Two: The Nature of the Medium—Phototheory 1930 to the Present

The search for evidence of innate difference has a long history. The power and prestige of modern science to speak for nature were recognized early on as useful tools in projects to define members of other groups as different and often inferior. Because the search for innate difference has been built on the foundation of scientific authority, critics of this search have had to turn their attention to the building blocks of that foundation. The most successful challenges to the use of science to define difference have addressed the role of science in culture and looked at how science is actually done, rather than assuming that the ideal of the scientific method accurately describes practice. In looking at the practice of science, critics have identified areas of potential bias such as the historical exclusion of women and minorities, the use of gendered language in the description of natural phenomena and metaphors which reinforce cultural stereotypes, and a dependence on binary systems of thought. Because the authority of the sciences to speak for nature rests on the ideals of objectivity and neutrality, a revisioning of scientific practice includes working towards what has been referred to as "strong objectivity"—that is, a conception of objectivity which takes into account the cultural embeddedness of scientific practice.

Interestingly, at the same time that the concept of objectivity in the sciences has undergone serious challenges, the practice of representation has been problematized in scholarship in art history, film and cultural studies, as well as through fine art practice. While a more general overview of scholarship concerning the body in representation will be provided in the following chapter, this chapter addresses the nature of photographic representation, its assumed objectivity or neutrality and its relation to the political. Writing about the field, historian Alan Trachtenberg remarks that the prominent theorists

of photography make it plain that "the medium must be recognized as exercizing a powerful kind of persuasion as a carrier of ideological messages in everyday life" (Trachtenberg, Introduction xiii).

Theories of photography are central to the study of clinical images,[1] with many of the theorists' observations about the nature of the medium echoing those of the Science and Technology Studies scholars addressed in the previous chapter. Like science, which has been understood as a maximally reliable and objective means of understanding the world, photography has been credited with providing unmediated vision or truthful traces of the object pictured.[2] This emphasis on objectivity and neutrality functions to enhance the ideological effects of photomechanical representations just as it does scientific findings. This chapter's overview of photographic theory could be seen as functioning in a parallel fashion to the previous chapter's description of the ways in which the myth of objectivity in science has been challenged. Just as critics of science have asked "how does science really work?" the theorists in this chapter ask "how does photography work?" In both cases the answers to these questions reveal culturally embedded and specific practices. Furthermore, rather than merely critiquing existing tendencies, both chapters point towards ways in which scientific and photographic practices might be renovated.

The importance of photographic theory extends beyond the understanding of the nature of the clinical image, as the indexical image belongs at the heart of any contemporary discussions of the body in representation. At this point in history, film, photo and video are <u>the</u> dominant means of picturing the body. For a number of reasons,

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[1] Although clinical images do include drawings and paintings (the former being long preferred for some kinds of work where photographs did not differentiate very clearly between different kinds of tissue), indexical images of the body produced through photochemical and, now, digital technologies have long dominated clinical and scientific practice.

[2] Both Linda Williams and Lynda Nead mention that, in legislation concerned with obscenity, photographic images are seen as providing unmediated access to the body pictured and are therefore considered more volatile than other representations (Nead, <u>Female Nude</u> 97).

including the relatively quick, easy, and cheap nature of these technologies, photo-images of the body have proliferated since the official introduction of the daguerreotype and the calotype in 1839 and surely outnumber representations in all other media combined. Arguably, photography has been a technology of the body. It was swiftly adopted and subsequently adapted to the purposes of showing our selves to ourselves. The ubiquity of the photo-body is an inescapable feature of contemporary life.[3] In questioning the neutrality of what might be seen as the most objective or truthful representation of ourselves through the study of the clinical photograph we may develop tools for better understanding other iterations of the photographed body.

In what follows, the emphasis on photography as it has been practiced in the visual arts is a direct reflection of the fact that many of the major interrogations of and interventions in how photography is understood have been undertaken by theorists and artists practicing in this area. It also reflects my own investment in and practice of photography. Subsequent chapters concerned with the beginnings of photography will address how the medium has been used and understood in historical study, which, unlike the fine arts, has not been concerned with how contemporary photographic practice might evolve, but rather how images might be used by historians.

In the forward to Abigail Solomon-Godeau's collection of essays, Photography at the Dock, Linda Nochlin states that "[n]othing, perhaps, is harder to write about intelligently than photography"(xiii). This, however, is exactly what Solomon-Godeau proceeds to do in the subsequent pages. It is also what the modest number of theorists addressed in this chapter have in common. Nochlin sums up the reasons why Solomon-Godeau is successful in this endeavor, noting that, like other engaged phototheorists, she

[3] Surely the omnipresence of the photo-body in daily life has had at least as significant an effect in terms of self image as the increasing appearance of mirrors did in the nineteenth century (Brumberg).

has rejected the mainstream tendencies to deal with the photograph as either a sort of naturally occurring, transparent document or a work of art, notable only for its formal properties which are read as the mark of the creative genius of the artist.

The first tendency, the persistent understanding of the photograph as a transparent and unauthored document is as old as the medium itself. Daguerreotypes are referred to as the mirror with a memory, and William Henry Fox Talbot's calotypes are described as having been drawn with the pencil of nature or painted by the sun. This emphasis on direct transcription without the intervention of a human agent reflects the longstanding faith in photographic truth and informs the production and reception of clinical images. At the same time, however, the absence of any attribution of human agency might also explain the ambivalent status of photography as one of the fine arts.

The second tendency becomes apparent in photography's first claims to fine art status. The first of these were mounted by pictorialists who consciously worked to counter the sharp and focussed representations characteristic of the medium in an effort to create atmospheric images evoking painterly mark-marking. This project was only partially successful and photography was only later accepted as part of the fine art canon through the efforts of champions of the modernist use of the medium such as John Szarkowski (Solomon-Godeau Photography). Even then, the photograph was still seen as evidence—this time evidence of the artist's unique sensibility or ability to capture the decisive moment.

Solomon-Godeau calls into question both these modes, the documentary and the aesthetic. Concerned with the ideological underpinnings of photographic discourse, she insists instead on the "historical, class located, institutionalized, and, above all, gendered positions from which this discourse originates and which it functions to sustain" (Nochlin

xvi). In short, the mirror not only has a memory, it also has a history. This mirror's reflections are the complex outcome of specific factors. As with science, who practiced it, when, and upon whom, all worked to determine which truths it would tell.

Like science, photography was initially a pursuit of the educated upper classes who had the means to amass the necessary equipment and supplies and the levels of education and leisure time to undertake what was a complex and time-consuming process. As noted in the introduction, many early scientific innovators were medical men. Although the technologies did become accessible to entrepreneurs from lower classes, photography remained the domain of specialists, who were most often neither women nor minorities for at least the first half century. The introduction of Kodak's box camera in 1888 was the first development which opened up photography to the general public.

Photography served as the handmaiden to many projects concerned with the definition of women, colonized peoples, racial and sexual others in this period, both overtly and otherwise. Overtly, photographs were commissioned by anthropologists to show racial difference (Banta and Hinsley). In colonial outposts and in the new world images were made which emphasized the uncivilized, childlike and backwards nature of the original inhabitants (Maxwell). Doctors took photographs of hysterics, religious monomaniacs and depressive types (Gilman, Seeing the Insane). The new fields of criminology, physiognomy, and sexology embraced the medium. All of these projects relied on the understanding of the photograph as an objective, reliable document which could be counted as evidence.

Less obviously, photography's powers to define were not limited to projects which supported a specific thesis concerning the nature of gender, racial or other difference. A short film on the life of nineteenth century Montreal photographer, William

Notman, demonstrates the way in which Notman's social position and allegiances determined who and what he photographed and how. Far from presenting a transparent window to nineteenth century Montreal, they presented a very particular picture of what the film-makers referred to as Notman's World. For example, although many people in Montreal were desperately poor and suffered under such terrible sanitation conditions that the infant mortality rate was higher than anywhere else in the world, there are very few images of the poor or their neighbourhoods. When laborers or the poor do appear they are sanitized and presented as "types" rather than individuals. Natives were portrayed so as to seem simultaneously irredeemably other and non-threateningly picturesque at the same time. The Canadian wilderness was romanticized so as to become a commodity that the Canadian Pacific Railway could market to tourists, while industry, as it intervened in these landscapes with rail lines, bridges and industrial chimneys, was portrayed as awe-inspiring and heroic. The captains of industry resemble noble portrait busts and their wives and daughters, porcelain dolls.

From this simple example it is clear that Solomon-Godeau's insistence on a theory of photography which rejects the assertion that it is naturally transparent and objective, is necessary to any project which purports to address the history and practice of the medium. However, the tendency to treat photographs as unproblematically true "windows on the world" is both seductive and widespread and the body of theory that critically addresses how photography works is quite small. What follows is a chronological overview of the development of photographic theory. Covering first early figures such as Walter Benjamin and Roland Barthes, it moves forward to discuss the first self-identified phototheorists of the 1980s, examining the theoretical underpinnings of their work. There will be a particular focus on the various iterations of Marxist thought to

which these theorists looked to legitimate the role of the visual arts, and photography in particular, in ideological struggle or social change. Finally, the individual theoretical and practical contributions of the scholars and artists working in the field, as models of interdisciplinary, politically engaged inquiry, critique, and artistic production will be considered for what they can offer the study of clinical photography.

To begin with, the project of photographic theory is neither immediately evident, often being confused with the more widely practiced areas of history or criticism, nor is it blessed with a long and noble history. Solomon-Godeau's work echoes and expands upon the efforts of photo-theorists whose work only began to appear in the 1970s in North America and the UK.[4] In one of the first collections on photo theory, Thinking Photography (1982), editor Victor Burgin asserts that he sees the essays in it as contributions towards the development of the not-quite-yet-existent field of photographic theory (1). This sense of breaking new ground is reflected in the text's less-than extensive bibliography which directs the reader to a handful of articles on photo-theory not included in the text and a larger number of works by, or concerning the theories of, Marx, Freud and, to a lesser extent, Foucault.

One advantage, however, of the relative youth of the field, is that it is possible to sketch out the history of photo theory in a reasonably comprehensive manner. Many of the contributors to Burgin's text are his contemporaries and colleagues. They publish in the same journals, critique each other's works, collaborate, sit on the same editorial boards, cite each other's articles, and thank each other in the "acknowledgments" sections of their books. However, before this small community began to coalesce, there were some texts produced which were germinal to later thinking in the area.

[4] Although there are separate trajectories in the development of Anglo and American photo-theory (Susan Sontag, and A. D. Coleman, for example, are much more significant figures in the U.S.), there are also enough significant areas of coincidence to treat them as part of the same larger venture.

Perhaps most notable are the essays of Walter Benjamin, a German Jew who was writing in exile in the 1930s. Working from a Marxist position, Benjamin was deeply concerned with issues around the politically engaged, or committed, production of cultural material. He writes about photographs in "The Author as Producer," the role of new technologies in changing discourses surrounding fine art in "The Work of Art in the Age of Mechanical Reproduction," and the relationship of the author to his or her practice or "production apparatus," which he saw as requiring renovation in order to achieve its revolutionary potential ("Work of Art" 24). These are still issues which concern the politically engaged artist or critic. He asked important questions about how the institution of photography functioned under capitalism and how it might be used in ideological struggle. For example, his recognition of how, in picturing difference, the photographer can turn abject poverty into an object of aesthetic enjoyment is a phenomenon with which contemporary artists still struggle (Benjamin "Author" 24).

This is a far cry from contemporary readings of photography as transparent windows on the world—a view which supported and was supported by documentary photo practice, such as that undertaken in the U.S. by photographers including Walker Evans and Dorothea Lange working for the Farm Security Administration under Roy Stryker during the Depression (Stange). Interestingly, just as Benjamin was theorizing artistic production as a tool in ideological struggle, Stryker was directing his photographers to collect specific kinds of images which could be used to create a specific vision of Depression era America. Although Stryker understood that photographs could be used to support a given world view or ideology, he and his photographers were simultaneously relying on and exploiting the general understanding of the photograph as providing evidence in order to imbue Stryker's theses of "America in Crisis" or "On the

Road to Recovery" with unassailable truth value (Tagg 192).

Little work followed Benjamin's lead in photographic theory in the post war years. Artistic techniques which had been developed in the early part of the century in hopes of fulfilling the revolutionary ends which Benjamin advocated, failed to achieve their potential. Theorist and historian Simon Watney, writing about the period, traces the development of one such project, "ostranenie" or "making strange" which Benjamin described as "a salutary estrangement between man and his surroundings" (Watney, "Making Strange" 167).

This practice of "making strange" describes a continuous project which originated in Russian Futurism, was advocated by Alexander Rodchenko and used by the German avant-garde, before finally being adopted by the Surrealists. The idea was, that by developing a new photographic language based on making the familiar unfamiliar through unorthodox camera angles and unusual choice of subject, the photographer could surprise or shock the viewer out of his/her usual way of perceiving the world. Using this technique, the photographer could make visible the invisible world of the worker and draw attention to social contradictions. It relied basically on an assumption that the photographer could shock the viewer out of his/her false vision of the world and allowing access to some sort of inner, true vision—a formulation which replicated in visual terms the dichotomy between true and false consciousness (Watney, "Making Strange" 157).

This promise was not fulfilled for a number of reasons, one of which was surely the emphasis on the power of the camera to strip away appearances and provide access to truth. However, although it became apparent that the revolutionary outcome of this deliberately cultivated look was not what its originators may have hoped, the "look" itself did not disappear. Watney traces how it was disseminated (through Berenice Abbott's

bringing Atget's negatives to the U.S.) and popularized with the resulting widespread adoption of "surrealist taste without surrealist values" (Watney, "Making Strange" 171). He notes that this look has dominated American photo practice ever since, and that although the images produced appear "resolutely 'modern'" they are at the same time innocent of any theory or ideology (167). He concludes:

> It does not require an especially strange sense of irony to appreciate the way in which a range of photographic techniques, which had been expressly developed to reveal the conditions of alienated life and consciousness, become themselves objects for alienated aesthetic consumption, a shattered mirror which obediently continued to reflect the world as it is not. (Watney, "Making Strange" 171)

In the promise and subsequent failure of "ostranenie" we can see both temptations which Nochlin credited Solomon-Godeau with avoiding—the understanding of photography as providing some magical access to true, transparent visions of the world and the seduction of the artist-genius' mastery of the formal play of unusual angles and mysterious subjects.

The first of these ways of viewing photography, the tempting belief that the camera can disclose an otherwise invisible bedrock of reality (Watney, "Making Strange" 174), is one which informs, and is critiqued by, other theories and practices. One body of work which provides a critique of these assumptions, and occasionally falls prey to them, is that of Roland Barthes. Working in the 1960s and 70s in a variety of related areas, Barthes represents probably the primary figure in the project of examining the photograph in terms of developments in semiotics. He addressed the nature of the photograph and of meaning in Elements of Semiology (1967), Mythologies (1973), The

Pleasure of the Text (1975), Image—Music—Text (1977), more famously in Camera Lucida (1982) and in a number of essays including the "Rhetoric of the Image" (1971). This is a complicated body of work which at times is only tangentially connected to the larger project of photographic theory.[5]

Barthes was working in what might be termed an interdisciplinary mode in that he recommended that some of the descriptive models from structural linguistics (based on Ferdinand de Saussure's work) might be usefully applied to systems other than natural language (Burgin, "Photographic Practice" 50) and used in the analysis of advertisements and other elements of visual culture. Elements of Barthes's usage of these theories are critiqued by other theorists working in the same area, including Umberto Eco. Barthes famously refers to the photograph as a "message without a code" (Barthes, "Rhetoric" 41) suggesting that, unlike the linguistic sign which bears an arbitrary relationship to its referent, the photographic image (an iconic sign) is actually caused by its referent. Barthes states that "in every photograph there is the stupefying evidence of this-is-what happened-and-how" (Burgin, "Photographic Practice" 61). Eco takes issue with this in "The Critique of the Image" (1970) stating that "the theory of the photo as an analogue of reality has been abandoned" because every image is born of a series of transcriptions and we must be trained to recognize the photographic image (Eco 33). He then proceeds to draw up a summary of ten codes (perceptive codes, codes of recognition, codes of transmission, etc.) which might be used to decodify semes (iconic signs which do not correspond to a word in the verbal language but are still an utterance[6]) (Eco 35).

[5] I should also note the importance of his essay "The Death of the Author" which challenges a modernist notion of the essential self and replaces it with a poststructuralist concept of a self which is shaped through language. (I speak it, it speaks me.) This is echoed later on in constructions of subjectivity through ideology.

[6] For example—an image of a horse does not mean "horse." At the very least it means "the white horse stands in profile" (Eco 35).

Taking into account then, Barthes's Marxist-inspired critiques of the effects of representation and his assertion of necessary relationship between the image and its referent, one could describe Barthes as being simultaneously knowing and naive in his readings of photography. His naiveté or desire for the photograph to exist as a kind of magical emanation from the referent (the "stupefying evidence" noted above) is particularly evident in the posthumously published, Camera Lucida, which was written following the death of his mother. In this he longs for something which will provide him with the certain knowledge or evidence that she was here and so looks to photography.

John Tagg, a theorist currently working on how photography means, refers to Camera Lucida "as a poignant reassertion of the realist position" (1) in the introduction to The Burden of Representation: Essays on Photographies and Histories (1988). Tagg's readings of the practice(s) of photography (to which I will return below) are such, however, that he identifies Barthes's reliance on attributing essential characteristics to the medium of photography, such as an "evidential force" or even a kind of "magic," as misguided. Like Solomon-Godeau, Tagg suggests it would be more fruitful to look at these characteristics as socially and historically specific effects of practices, institutions and processes because abstract concepts such as evidence mean little when taken out of context. To underline the specific character of the concept of photographic evidence, he asks "under what conditions would a photograph of the Loch Ness Monster [...] be acceptable?" (Tagg, Burden of Representation 5). Clearly the "evidential force" of the photograph is not sufficient, just as in the previous chapter, good scientific method was not sufficient to legitimate studies of the same phenomenon.

Around the same time that Camera Lucida was published in English, an American author, Susan Sontag, produced a collection of essays entitled On Photography (1977).

Originally published in the New York Times, Sontag's essays, according to one critic, "rocked the photographic community" (Eisinger 258). Rejecting a view of the photograph as a medium which tended to "trade simultaneously on the prestige of art and the magic of the real" (Sontag in Gallop, "Pleasure" 400), these essays can be seen as the first full-blown statement of what we would now see as the hallmarks of postmodern criticism. Influenced by Marxist thought, if not explicitly theorized in relation to it, her essays concentrated on how photography functions in a social context, suggesting that photography "stoked the engines of consumption by stimulating desires with alluring imagery" (Sontag in Eisinger 259). She presents photography finally as the ultimate medium for turning experience into a commodifiable thing.

Central to her work was the assertion that there is no stable meaning inherent in photographic images, which only gain meaning through context. For Sontag, the manner in which photographs could slough off one meaning and acquire another with a change of caption (possibly eroding even the concept of meaning in the process) pointed to a limited role for photography in political struggle. Like Benjamin, she pessimistically noted the manner in which even politically charged images, once they acquired a certain distance in time, could be co-opted by "art" and incorporated into the modernist project (Sontag in Eisinger 261).

Although both popular and influential, Sontag's work suffers from some of the same mythologizing of the capabilities and nature of photography as Camera Lucida.[7] Tagg describes On Photography as being characterized by "a series of sudden, dramatic

[7] The presence of mythologizing tendencies which emphasize some inherent trait in photography do not, of course, immediately invalidate the usefulness of the work. Marina Warner, for example, in "Stolen Shadows, Lost Souls: Body and Soul in Photography" identifies the photograph as a material trace of the body, much as Barthes does. However, she then proceeds to analyzes the camera as an instrument of appropriation which, by capturing the images of colonized peoples and removing them to urban centers, transformed them into a kind of commodity, object for study or nature morte, making the idea of soul stealing (which she clearly attributes to the colonizers) more an accurate description of practice than a bit of naive folklore.

and epigrammatic assertions [...] neither supported historically or developed theoretically" which "spurt the argument forwards, carrying the reader with them by the force of their flat conviction" (Tagg, Burden of Representation 204). Neither text is widely used by photo-theorists working on the left since the 1970s. Although not apolitical, Barthes's and Sontag's texts are neither explicitly framed in relation to theoretical concerns, nor do they leave open the possibility for significant political intervention in terms of photographic practice. Barthes's assertion of the magical nature of the medium leaves as little room for an engaged studio practice as does Sontag's pessimistic assessment of the fluidity of photographic meaning. What these two texts do contribute, however, is evidence of an interest in examining photography rather than taking it for granted, and thus affirming its status as a worthwhile object of study.[8] This is something they share with a collection of essays, Light Readings (1982), by American author A. D. Coleman, who wrote about photography as a necessarily social medium in which the aesthetic and political could not be divided.

In fact, in taking photography seriously, rather than disregarding it as obvious, innocuous, or only concerned with the aesthetic, all three authors posit a dark side to the practice. Coleman sees a photographically illiterate public vulnerable to manipulation. Sontag sees a certain violence inherent in the act of photographing, seeing the photographer as parasitically feeding off others' pain while going through the motions of loading, pointing and shooting (all of which have parallels with more obviously deadly weapons than the camera) (Sontag 14). She further suggests that photography is essentially an act of non-intervention. For Barthes, the dark side finds its expression in the possibility that the photograph itself might somehow wound the viewer. Some good

[8] John Berger's Ways of Seeing, a more overtly political text, served something of the same function in the United Kingdom, encouraging a critical engagement with art historical, advertising and other images.

photographs, have, for him, what he calls a "punctum"—some detail which might pierce him. Through his description of this intense interest and desire provoked by the image, however, it becomes clear that this pain is one which is inextricably entwined with pleasure.[9]

Although this idea of photography as a dangerous practice as a result of its essential nature does not have a place in the work of Marxist phototheorists like Allan Sekula, Jo Spence, Victor Burgin and John Tagg, we will see that the possibility of danger remains. Understanding photography as a practice which is firmly grounded in a set of social relations and explicable through theoretical examinations of the social does not make it a safe place. In fact, since modernism, with its emphasis on pure form and aesthetics, there really has been no safe place—and most contemporary theorists would agree that the safety of modernism was largely illusory anyway.

Of the above-listed group, all of them except John Tagg are practicing artists. All except Sekula, who was working in the United States, were based in the United Kingdom in the mid-1970s through the mid 1980s. The three individuals working in the U. K. were all somehow associated with the Polytechnic of Central London. Burgin and Tagg both taught at the Polytechnic which Spence attended as a mature student. The Polytechnic provided a sort of center for individuals interested in photography in the same way that Birmingham provided a center for Cultural Studies. Other individuals who were also associated with the Polytechnic and who work in the area of phototheory and criticism include Simon Watney, Jan Zita Grover, and Liz Heron. All the theorists addressed here

[9] The "punctum" or small detail which is occasionally present and pierces the viewer (but which is by Barthes's definition not placed there by the photographer) is seen in contrast to what Barthes terms the "studium" that is the subject of the photograph. This is probably the most recycled and referred to element of Camera Lucida. Unfortunately, the way Barthes constructs the punctum is so highly personal that the assertion by other writers that this or that part of an image pierces him/her can feel forced or arbitrary. It has been taken up to some good effect in relation to psychoanalytic readings (see Jane Gallop's "The Pleasure of the Phototext") which adopt the idea of the punctum as opening up a blind field in which the subject pictured might continue to live outside the frame.

have in common that they developed an interest in photography around the same time and are now considered major figures in the development of photo-theory.

It would be, however, a misrepresentation to suggest that their theoretical concerns and fine art practice were homogeneous, as will become apparent. It would also be inaccurate to mythologize the Polytechnic as some sort of Edenic institution. Just as in recent years there has been an acknowledgment (by Stuart Hall among others) of how difficult the introduction of feminist concerns and practice were for cultural studies, there were differences among people working in the Polytechnic as well. Writing about the institutional structure at the Polytechnic, Jo Spence commented on the power differential between teachers and students and how the "Law of the Father" was being enacted in the classroom at the same time that it was being deconstructed. She also notes that the curriculum encouraged a continuous assault on the students' preconceived ideas (she says she could deconstruct things "until the cows came home") and although this was in some ways salubrious, there was the subsequent problem that "you cannot just deconstruct something and put nothing in its place" (Spence in Grover 10). She unequivocally states that she had to look elsewhere for the tools necessary for what she termed "reconstruction" (Grover 10).

What Sekula, Spence, Burgin, Tagg and others working in the same vein do have in common which makes it reasonable to speak of a unified group of Anglo-American phototheorists, is a commitment to politically engaged scholarship and art practice, both inside and outside of institutional settings. Recognizing through the example of feminist practice/scholarship which advocated an expanded understanding of the political, and through reading Walter Benjamin, that having the correct tendency alone was not enough, they set out to renovate their practices of art and theory. Theirs is specifically a political

practice from the Left, based on Marxist and feminist theoretical work, also taking into account contributions from Foucault and psychoanalytic theory. Influenced by these bodies of theory, they set out to interrogate and/or apply them in an explicit way in their own work.

The Marx these theorists were using, however, was not the Marx of Walter Benjamin (nor even Sontag and Barthes). Traditional readings of Marx had focussed on a model which was looking forward to revolution. This approach emphasized a model, now referred to as "economist," which posited a base/superstructure model in which the economic relations provided the base and the superstructure (cultural elements were included here) was merely a reflection of what went on in the base. This meant that the economic was the determining factor in the last instance, leaving the arts as a kind of icing on the revolutionary cake (Burgin, Introduction 4). This interpretation of the role of art would suggest, for example, that Notman's photographs reflected the economic realities of nineteenth century Montreal, but did nothing to shape them.

One of the enabling conditions which allowed scholars at the Polytechnic and elsewhere to use Marxist theory was the rereading of Marx's theories and, in particular, the revamping of the concept of ideology in Louis Althusser's work. Older readings of Marx did not focus on ideology, seeing it as the false consciousness which concealed the exploitative nature of class relations, or as one theorist puts it "an optional extra" (Meyers 5). Althusser, however, made it central in "Ideology and Ideological State Apparatuses" which posited a central role for cultural production in social relations. Rather than existing as an afterthought, or icing on the cake, culture now occupied a position as an ideological state apparatus (ISA) along with the hitherto neglected areas of the family, mass communications media, the schools and so on. Such ISAs had the effect

of both reflecting and reproducing the status quo and the subject and thus provided a vital point of intervention. As John Tagg later remarked, "it provided us with an alibi" (Tagg in Lukitsh 9). If ISAs offered pictures of subjectivity in which the subject misrecognizes itself (interpellation), then artists working within ISAs related to cultural production, could to try to alter the pictures of subjectivity being offered. In other words, ideology was produced through practices of signification (Burgin, Introduction 8). While Althusser still agreed that the economic was "determining in the last instance," he asserted that this was not really such a problem because "the lonely hour of the last instance never comes" (23).

This recognition of visual representation as playing a role in the formation of ideology not only supports the work of photo theorists and artists, but also underlines the importance of examining the role of photography as it interacts with other institutions such as science and medicine. Ideologies concerning the body and difference are not only formed in relation to written evidence, but also through representational practices.

It was not only Althusserian Marxism which provided the enabling conditions for theoretical work on photography. The writings of Foucault, feminist scholarship and psychoanalysis in different combinations and in different ways over time, are all integral to the work of Burgin, Spence, Sekula and Tagg. I want to draw particular attention to the fact that for each of these theorists their relationship to theory was not simple, but instead consisted of a ground of shifting alliances and recombinations. Tagg writes that for a time he was working with Althusser's theories of ideology and he had (vainly) hoped that he could "plug Foucault's account of specific institutions, discursive formations and their power relations right into this model" (Tagg in Lukitsh 8). Similarly, Burgin has looked to Althusser, psychoanalysis, film theory, feminism and semiotics to account for

the formation of the subject, while Spence and Sekula's works betray similar travels through these fields.

Across the board, however, there are a number of points in their work which are fairly stable and provide the grounds for their practice. A summary of these is as follows:

—the recognition of the place of cultural practices in ideological struggle (through Althusser's concept of Ideological State Apparatuses)

—the understanding of politics as occupying a broader field (through feminist scholarship)

—the recognition that the subject is not a trans-historical, pre-given entity but the product of specific social relations (through interpellation in ideology, semiotic or psychoanalytic processes and Foucauldian conceptions of subjectivity[10])

—the understanding that relations of power work across social practices, institutions and discursive formations (from Foucault's theorization of power)

—the recognition that photography is a result of historically and culturally specific discourses, institutions and practices (through Marxist, materialist readings).

These points, and the theory which supports them, provide the bases for a decisive rejection of the temptations of modernism noted by Solomon-Godeau at the beginning of this chapter. Neither the natural transparency of the photograph nor the claim of the distinctive vision of the artist-hero who stands outside of culture are tenable in the face of calls for an understanding of the subject and photography as specific cultural and historical outcomes. Although none of the four theorists seem to use the

[10] In the Order of Things, "Foucault insists that man as we know him is the product of certain historical discourses" (Silverman 129).

term,[11] their practices could be characterized as postmodern.[12]

For Burgin, Sekula, Spence and Tagg, these five points around which their theoretical and artistic practices center can be seen as the end point of much theoretical work. Writing about the generation of artists who came of age immediately following this group, Solomon-Godeau writes that, for younger artists, the conclusions (if they can be called that), which the previous generation had worked so hard to come to, provided a point of departure or a place for their younger colleagues to begin their investigations (Photography at the Dock 88). My own position, two decades later, is not dissimilar, in that the work of phototheorists on photography, the construction of subjectivity, Foucauldian conceptions of power and politics in an expanded field, along with the contributions of Gramsci through cultural studies, are already in place. They provide the ground, or the point of departure, for my own work, which would not be possible without them.

However, for the first of these five points, the recognition of the place of cultural practices in ideological struggle, I find different theoretical grounds. There were some problems with the Althusserian model. One was that although it maintained the idea that cultural institutions were "apparatuses" and thus valid areas of intervention, it also suggested that if these interventions did not move outside of these institutions to take on the state, they were merely reformist and not effecting a valid intervention in the political. It also maintained that these cultural apparatuses only reflected the power relations set elsewhere in the real realm of production, with the result that the model began to look more and more like the old base and superstructure one, with all the important stuff

[11] This is excepting Sekula who rejects it, hoping to invent a third space for himself between modernism (whose assumptions he largely rejects) and postmodernism (which he sees as relying on the practice of appropriation which does not interest him) (Photography Against xi).

[12] The use of quotation, appropriation and pastiche (all characteristics of postmodern art practice) are particularly evident in Burgin's work (Between).

happening at the level of production or the base. (Tagg in Lukitsh 9). There was also a certain circularity in the way in which ISAs were "bound to perform in unison a function procured for them in advance by the power and unity of purpose and ideology of the already ruling class" (Tagg, Burden of Representation 24). This circularity also appeared in the idea of interpellation which was supposed to explain the constitution of the subject in ideology, but assumed the preexistence of the subject who would undergo this process (Burgin in Batchen 6).

In my own work I use an alternate reading of Marx, that of Antonio Gramsci, through Stuart Hall. Gramsci's work functioned for Hall, and others working in the fledging area of cultural studies, in much the same way that Althusser's did amongst the scholars at the Polytechnic.[13] Hall writes that Gramsci "made it possible for us to read Marx again. [...] not as a quasi-religious body of dogma but as a living, developing, constantly renewable stream of ideas" (Hall, Introduction 8). His work provides a salutary expansion of the conception of politics. Specifically influential are his notion of hegemony and his understanding of "the production and transformation of 'common sense' [...] as the cultural terrain which all ideologies must [...] negotiate" (Hall Introduction 9).[14]

At the simplest level, Gramsci's contribution means that I can maintain the central features of this group of phototheorists' assumptions, without having to negotiate Althusserian concepts which have become problematic and generally failed to live up to their initial promise. Through Gramsci's concept of civil society as being separate from

[13] The lack of any overlap between Marxists using Althusser and Marxists using Gramsci is something I cannot really explain. I could speculate that, although Gramsci's works predate Althusser's, their fragmentary nature and later translation meant that fewer people had access to them. Also I should note that there is little written about photography (other than images in the mass media) from a Gramscian perspective.

[14] Gramsci introduces the term "common sense" to describe the uncritical and partly unconscious way in which people perceive the world.

the public institutions of the state, but still an area where the hegemony of the dominant class is exercised, one can support the concept that the cultural is a valid area of intervention. His notion of common sense as the site for the construction of, and a site of resistance to, the dominant ideology (Simon 26-7) also provides a point for intervention. Like Althusser, he sees ideology as having a material existence and being embodied in the political and practical activities of men and women (Simon 59) and in the institutions and organizations where social practices take place (Simon 61). However, his view that "ideologies are not transformed by wholly replacing one with another, but rather by renovating and/or critiquing that which exists in favour of new alignments between different discourses" (Kirsh 17) provides a model which distinctly articulates how it is that cultural (and other) interventions might be efficacious in terms of social change, not merely as a means of reforming apparatuses which were arms of the state. According to Antonio Gramsci "common sense" is not only a product of the present moment, but necessarily incorporates traces of past articulations (Hall, "The Whites" 13). Among contemporary artists working with these conceptions, Carrie Mae Weems, who will be addressed in chapter eight, is producing art that is notable for its subtle, elegant and effective interventions in common sense conceptions of race and otherness.

While existing in general as models for politically engaged scholarship and art practice and opening up the possibility of a critical, theoretical approach to the study of photography, Tagg, Sekula, Burgin and Spence also make individual contributions which are valuable specifically to the study of clinical images. Sekula, in Photography Against the Grain (1984) and, to a greater extent in "The Body and the Archive" (1986), and Tagg, in The Burden of Representation, both insist on replacing essentialist views of photography with an understanding of the medium as a complex historical outcome which

is in no way guaranteed. This rejection of essential photographic neutrality and objectivity parallels the rejection of these traits in critiques of science. Furthermore, their Marxist/Foucauldian theorizations of specific photographic practices as disciplinary speak directly to the relationship between photography and other institutions such as medicine, criminology and anthropology, something which has a direct application to the study of clinical photography.

Challenging an essentialist view of photography, Sekula refers to the established myth of photographic truth as a "particularly obstinate bit of bourgeois folklore" (Photography Against 5). He contends that "the meaning of the photograph, like that of any other entity, is inevitably subject to cultural definition" and that "if we accept the fundamental premise that information is the result of a culturally determined relationship (not some inherent properties which reside within the image itself) then we can no longer ascribe an intrinsic or universal meaning to the photographic image" ("On the Invention" 5). The photograph according to Sekula is "an 'incomplete' utterance, a message that depends on some external matrix of conditions and presuppositions for its readability" ("On the Invention" 4). Arguing against the rhetoric of neutrality, he states that it is necessary to understand that all communication, including photography, "is interested, not impartial" ("On the Invention" 4). Sekula is looking to develop "a historically grounded sociology of the image, both in the valorized realm of high art and in the culture at large" (Photography Against 6).

According to Tagg, it is important to challenge the assumed transparency of the photograph as "the transparency of the photograph is its most powerful rhetorical device" (Burden of Representation 35). Tagg outlines the project saying that "[t]he photograph is not a magical emanation but a material product of a material apparatus set

to work in specific contexts, by specific forces for more or less defined purposes. It requires, therefore, not an alchemy but a history, outside which the existential essence of photography is empty" (Burden of Representation 3). In order to achieve these goals, Tagg suggests that the photo-theorists ought to undertake "real historical research" as a means of countering the unsupported, underdeveloped sort of assertions attributed to some authors in the field. (Historians' approaches to photographs as primary sources will be addressed in chapter four.)

Both Sekula and Tagg turn to the archive in their attempts to demonstrate the manner in which the photograph's ideological existence arises from its material existence in specific social practices, and the real effects that this understanding of the photograph has in terms of repression or control. Sekula examines how the evidentiary functions of certain kinds of portraiture (medical, criminal) were the result of a complex set of social practices (particularly those which appeared with the professionalization of police work) and had the effect of making it possible to "establish and delimit the terrain of the other" by means of the photograph ("Body and the Archive" 7).[15] He points out, it is necessary to look at how the discourses of photography intersect with the discourses of other institutions which tend to preserve and reproduce hierarchies of power relations (Sekula, Photography Against 226).

John Tagg sees the evidentiary character often assumed to belong naturally to photography as being "bound up with the emergence of new institutions and new practices of observation and record keeping: that is those new techniques of representation and regulation which were so central to [...] the development of a network

[15] Tagg emphasizes that "[t]he very idea of what constitutes evidence has a history—[...] it is a history which implies definite techniques and procedures, concrete institutions, and specific social relations - that is, relations of power. It is into this more extensive field that we must insert the history of photographic evidence. The problem is historical, not existential" (Burden of Representation 5).

of disciplinary institutions—the police, prisons, asylums, hospitals, departments of public health" (5). He continues, saying that:

> the development of new regulatory and disciplinary apparatuses was closely linked, throughout the nineteenth century, to the formation of new social and anthropological sciences—criminology, certainly, but also psychiatry, comparative anatomy, germ theory, sanitation and so on—and the new kinds of professionalisms associated with them, which took both the body and its environment as their field, their domain of expertise. (5)

Drawing attention to the particular relationship between the technology and the body, Tagg asks the reader to "[i]magine a history of photography as an insistent practice, inserted into the very heart of the modern social order and characterized by a double momentum: an ever more intimate and exacting attention to bodies, dividing them, apportioning them, observing them, supervising them, and, in the same moment, exerting a control over them [...]" (205).

Sekula, writing about the ideological functions of representation, describes photography as a practice which is "haunted by two chattering ghosts"—art and science (Photography Against 78). Rather than running counter to each other, he sees these two tendencies as operating in tandem, with one using photography in a way which fulfills "a bourgeois conception of the self" while the other establishes and delimits "the terrain of the other" (Photography Against 79).[16] An example of the first would be the portrait of a "man of genius" by a "man of genius" and the other would be the mug shot (Photography Against 79). For theorists, including Tagg and Sekula, who are writing about the way the

[16] This formula oversimplifies the visual cultures of art and science—both of which are equally capable of representing people as autonomous subjects or objects of an othering gaze. This is something which Sekula recognizes elsewhere, as will be further discussed in the following chapter.

"flow of symbolic and material power is engineered between fully-human subject and less-than-fully-human object along vectors of race, sex and class" (Sekula, Photography Against 79), the mug shot seems to be the primary example of the sort of photographic othering or controlling they identify as integral to the new sciences of the body.

Others have also recognized the connection between photography and other cultural institutions. Two cultural theorists, Brettle and Rice note that "[s]ince the early 1970s photographic theories have emphasized the ways in which the medium of photography has been used by our dominant institutions" (2-3) of which medicine certainly is one. Historians of technology have come to recognize that technologies themselves are not neutral. One of them, Patrick Maynard, writes that it is not enough to relate the history of a technology as a series of triumphs of materials engineering, as has often been the case with photography (Maynard 78). Every "indispensable tool for modern living" and "[e]very technology has an inherent agenda" (Barrett 141)—although identifying that agenda is not always a straightforward procedure. Writing on photography, Maynard characterizes photography as not simply a technology for increasing our mark-making abilities but as a technology of imagining. Claiming that along with amplifying certain powers, technologies tend to channel what we do and how we do it, he draws attention to the fact that such "imagining technologies" are not frivolous diversions (Maynard 85), since the mere imagining of situations can affect human desire and behaviour (Maynard 95).

Finally, beyond providing the theoretical groundwork for a critical examination of clinical images, Sekula, Spence, and Burgin also provide a model for my own interdisciplinary inquiry in that they are also practicing artists. By insisting that neither their theoretical work, nor their studio work is primary, they make it explicit that their

studio work informs their theory work and vice versa. This balance is evident in their publications Sekula's Photography Against the Grain (1984), Spence's Cultural Sniping (1995) and Burgin's Between (1986), where neither element is reduced to occupying a sort of secondary role. The visual material does not serve as a kind of illustration of their "serious" text-based work and stands on its own, just as their written work does. Here the "usually separate positions of writer and photographer are allowed to coexist" (Sekula, Photography Against ix). This recognition that these practices involve "usually separate" positions points to the interdisciplinary nature of their work. Tagg's call for a history of photography,[17] and Burgin's call for links with sociology, are other instances in which crossing disciplinary borders is seen as a fruitful strategy for phototheorists. Going back to the beginnings of photo theory, Walter Benjamin also suggested such strategies (such as encouraging writers to take photographs) might be politically efficacious because he felt that, "[i]ntellectual production cannot become politically useful until the separate spheres of competence to which, according to the bourgeois view, the process of intellectual production owes its order, have been surmounted. ("Author as Producer" 24).

Of course, I believe that one of the reasons that Sekula, Spence, Burgin, and others like myself engage in more than one area of practice is in the hope that, seen as different aspects of the same project, the parts will provide an opportunity for a richer or more complex understanding of the issues at hand than could be achieved only through writing or only through studio practice. None of them see their practical work as being merely a procedure of mechanically "applying" theory to fine art. Burgin explicitly states that he sees his studio work as "theory in practice" (Bright 5) and when asked, as he often is, about why his art is so "difficult" he responds that if he were able to "explain it" or

[17] John Tagg, in an interview, addresses the problem of marketing oneself as researcher in an interdisciplinary or non-traditional field, noting that he could not find a position teaching art history because his formation did not reflect the canon.

produce the equivalent effect in words he would have done so. Similarly, Sekula states that it would be a mistake to assume that one could find in his art work "practical answers" to the "theoretical questions" he poses elsewhere (Photography Against ix). In terms of positioning their work, I am uncertain as to whether John Tagg has identified their role precisely, or ducked the whole issue entirely, when he refers to Spence and Burgin as both and/or neither/nor practitioners and theoreticians (Lukitsh 7)!

While this model of theorist/practitioner is inspiring, the products are not always beyond criticism. Such pioneering work can recognize a problem before having a means of dealing with it. Allen Sekula's studio work, for example, has remained tied to the assumptions of documentary practice, which rely on the assumption that the camera can show the viewer how things really are. In some ways his innovation in terms of theory has outstripped his innovation in practice. He is described somewhat paradoxically in a review as both providing a critique of documentary practice and as being little more than a "location scout with a small camera" (Slyce 116). Other documentary photographers, such as Jo Spence and Carrie Mae Weems who will be discussed at greater length in chapter eight, have revamped their practice to meet the challenges posed by theory and produced very interesting work which overtly questions the documentary mode (Kirsh).

While Burgin's work differs in that it is clearly not documentary, it, at times, suffers from being somewhat inaccessible. In an article by Laura Mulvey "Dialogue with Spectatorship," Burgin's work is compared to that of Barbara Kruger who interrogates similar issues, including: the construction of subjectivity, the representation of gender difference, and the politics of the gaze. However, unlike Kruger, Burgin's appropriated or staged images of women have been misread as replicating objectifying practices of

representation which he was trying to critique[18] (Burgin in Batchen 8). One such example is from his 1978 piece Zoo. In it Burgin superimposes a text describing Bentham's Panopticon over the image of a woman in a peep show. Although he states that misunderstandings of his representations of women are always based on simplistic or reductionist readings of the work, I wonder if there is not a problem when, more than once, the work produced is misread as confirming what one has intended to critique. Burgin takes the stand, however, that while his writing is aimed at the classroom where he has to reach a high percentage of the members of his class, he hopes in his artwork to move in the "different discursive space of the gallery [...] where I'm relieved of the imperative to be 'understood'" (Burgin in Batchen 7). Although I appreciate some of his formulations as being useful models for practice, this last I have serious reservations about. I do not think it productive to make art in which I am relieved of that imperative!

However, even in cases where these artist/practitioners' experiments were less than entirely successful, the problems they encountered surrounding theoretically engaged practice have not gone away. This example of the representation of women, including the power differential between the photographer and the object of his/her investigations, is still an issue with which contemporary artists struggle.

Spence's use of volunteers is one way of addressing this. Her decision to consistently identify her models and emphasize their collaborative role in her process (sometimes more properly "their joint process" as in the case of Rosy Martin, with whom she develops her ideas about photo-therapy) shows an effort to acknowledge their contribution and give away the power of the artist-hero which is in some ways inherent in the role of photographer (Spence, Putting Myself 173). She also acts as her own model.

[18] Burgin was influenced by Laura Mulvey's "Visual Pleasure and Narrative Cinema" which suggests that the (feminine) object is constructed as passive in relation to the active male gaze.

The efforts of Burgin, Spence and others to disrupt the one-sided looking relationship inherent in the photographic process and to critique the ways in which specific photographic practices have been accorded the status of truth-tellers contribute to the overall project of an interdisciplinary approach to the study of clinical photography. Like Science and Technology Studies, the study of photography is innately interdisciplinary. A late-comer to the domain of fine arts, it is studied to some extent in art history, but also by studio artists, cultural theorists, sociologists, semiologists, and historians.

As we have seen, in feminist critiques of science and medicine and in theories about photography, the concepts of objectivity and neutrality have been problematized. Neither scientific method nor photography exist in some essential form outside of culture. Critics of both projects call for specificity in the study of these, arguing that identifying gaps between theory and practice might allow for more accurate descriptions, and perhaps the improvement of each. As Tagg argues, photography needs a history, not alchemical arguments about its essential nature, and the history that he is calling for is a history of ideas, a history of overlapping discourses, rather than a linear story of technological advancement and invention.

All of this work provides what Tagg would call the "alibi" for my project—asserting that it <u>is</u> political and not without effect. Specifically, the recognition that material practices have ideological effects, and that specific photographies are the result of these practices, provides a foundation from which to examine clinical images of the body as a site from which different discourses concerning the role of the patient, the picturing of the gendered/racialized/class other, the scientific status of medicine, and the professional status of clinical photographers overlap with effects in terms of the exercise

of power. An understanding of the constructed role of all photographies allows for a general critique of dominant assumptions about the medium, while a historical, theoretical study of a particular photography allows me to intervene in the effects of the particular kind of representations of the body it sanctions.

Just as photography, the scientific method, and concepts such as objectivity have such histories, so does the body. In chapter three, using theoretical work in the fields of cinema, postcolonial and queer studies on the representation of difference in film and photography, I will consider the way in which overlapping and contesting discourses operate to define and delimit the meanings attached to the body in representation.

Chapter Three: The Body in Representation

Having considered, in the previous chapters, the foundational myths upon which the prestige and power of science and photography rest, I turn my attention here to the specific site where these practices have been used to construct evidence of innate difference—the clinical photograph.

While any evidence of difference can be legitimized by scientific discourse and pressed into service, for example, performance on IQ tests, annual income, or infant mortality, it can be argued that the ultimate goal of the search for innate difference is a legible body—a body from which difference can be read as from a page of text (Somerville 40). Caesare Lombroso's study of what he defined as the physical markers of the criminal type, Jean-Martin Charcot's demonstrations and documentation of his hysteric patient-performers (figure 1), Louis Agassiz and J. T. Zealy's photographs of people living under slavery (figure 6) and other searches for evidence of the natural inferiority of non-whites, indigenous peoples, or the poor all have at their center this desire for this legible body of the other.

Predating photography, the search for legible, somatic evidence of difference and, by implication, inferiority, has considerable common sense appeal and continues up to the present day. As such, it has implications for contemporary conceptions of difference, both narrowly in terms of current scientific practice and, more broadly, at the ideological level of common sense, as the legacy of earlier definitional projects.

Although considerable work has been done on the construction of difference, examining how women, sexual and racial minorities, and other members of non-dominant

groups have been "othered," less has been done to specifically address the role of visual representation in these processes. Furthermore, little has been done in terms of theorizing representations of the body in relation to scientific and photographic truth. However, given the powerful role of the visual, and in particular the photographic, in shaping concepts of self and other, it is necessary to consider the mechanisims of representation in relation to the clinical image. Because any specific theorizing of the body as an object of representation has been done in the context of other kinds of representations of the body, this chapter will rely heavily on work done in fields such as art history, cinema and cultural studies which have a history of taking the body in representation as their own object of study.

This has two results. The first is, that by studying what and how other kinds of representation of the body mean, we may find some useful models for the study of clinical images. The second, and possibly more important, result is that an examination of other kinds of corporeal representation provides a picture of the cultural background against which clinical photography has been practiced. Because the producers and consumers of clinical images are influenced by ideas about the representation of the body in the larger culture, it is important to consider what these are, and how they might influence the production and reception of scientific images of the body.

One could flippantly describe this chapter as an effort to answer the following: does the clinical image have more in common with portraiture or pornography, fine art or freak shows? In the end, I will touch on all of these practices in trying to establish a kind of family tree showing the relationships between clinical images and other kinds of corporeal representation. These comparisons are undertaken in the hope that an examination of the assumptions that lie behind the production, circulation and

consumption of representations of the same subject (the body) might shed light on the clinical image.

The following comparisons between different modes of representing the body will not merely catalogue visual or stylistic similarities and difference, but will address points of intersection and coincidence between the discourses which surround these practices. Just as warring discourses are understood to have created sexuality as an object of knowledge and of pleasure, these same discourses (art, obscenity and medicine to name several) have interacted across the field of the body in representation. The Foucauldian understanding of the pleasures of the body as subject to historically changing social construction, is mirrored in the socially and historically contingent practices of representing those bodies. The body in representation is implicated in the exercise of power and the fixing of sexualities, genders and identities.

In terms of the political aspects of this study, it is important to note that a central characteristic which separates representations of the body from other kinds of visual practice, and makes it a particularly fruitful area of study for scholars concerned with difference, is the potential for the formation of subject positions in relation to the bodies pictured (de Lauretis; Doane). While any image can be a source of knowledge or aesthetic enjoyment, images of the body can also function as a point of identification or the object of a desiring, objectifying or othering gaze. For scholars interested in questions of identity and power, the role played by corporeal imagery in the formation and maintenance of ideology and the subject under ideology is of particular importance.[1] As addressed in the previous chapter, Marxist and feminist, as well as queer and post-colonial, scholars have

[1] Although there are examples which do not rely so exclusively on the body such as the work of cultural geographers on mapping and reading urban space (David Bell and Gill Valentine), and art historians on photographed and painted landscape (Deborah Bright. "Of Mother Nature and Marlboro Men; An Inquiry into the Cultural Meaning of Landscape Photography.")

turned their attention to practices of representation, in order to better understand how class, gender, sexual, racial and ethnic difference are constructed.

The point in delineating the exercise of power in science, photography and elsewhere, is that it allows for intervention in dominant defining discourses. Where there is power there is also resistance (Williams 86), and, in tracing the exercise of one, we might find openings for the exercise of the other. Several scholars have identified the mapping of the interactions between image-making and the construction of otherness as laying the foundations for resisting dominant definitions of difference. As Lynda Nead writes, outlining the territory of the discussion is a productive exercise because once "you know the terms of the debate then they can be played with, disrupted" and this opens up the possibility for challenging and progressive new practices (11). Echoing this, Linda Williams asserts that this is vital, because (as Foucault reminds us) we have all been constructed within proliferating discourses of sexuality (which find expression in corporeal imagery) and we need to pay attention to how they have constructed us so that we can deconstruct them (Williams 55). This is particularly vital work because of a longstanding disinclination to seriously consider discourses about bodies and pleasures; collectively we are just not very practiced when it comes to dealing with explicit images of bodies. As Grace Lau puts it, we greet them "with anxiety and an underdeveloped history of looking" (195). This may seem obvious in the case of discussions of the pornographic, but applies also to other genres of corporeal imagery. Even though clinical images are not necessarily overtly sexualized, the fact that they include images of unclothed bodies means that they tap into some of the same anxieties as overtly sexual representation. Just as the previous chapters have focussed on scholarship concerned with the renovation of repressive tendencies in the practices of science and photography,

this chapter will consider the possibilities for both repression and resistance in various modes of corporeal representation.

I will begin with the seemingly straightforward question of what kinds of images are included in the category of "representations of the body." The practice of portraiture will be considered as a kind of testing ground to define what counts. The chief advantage of starting with portraiture is that it is possibly the most widely practiced and circulated means of depicting people. As such, it is simultaneously influential in defining the visual conventions for representing the body, while being normalized to an extent that its conventions are almost invisible. Like the technology of photography, in everyday practice, portraiture is considered too obvious to merit serious consideration. Furthermore, as will be addressed below, despite representing humans, portraiture's status as corporeal imagery is ambiguous.

This is not the case with the next representational practice to be considered—the nude. A significant portion of this chapter will be devoted to examining potentially useful scholarly approaches to this widely practiced and circulated genre of corporeal representation. The high art practice of representing the nude, and in particular Kenneth Clark's famous study concerning it, are the background against which all subsequent studies of the body in representation exist. The assumptions inherent in the practice, as well as subsequent critiques, will be outlined and evaluated for their respective powers to define and to defy definition. Provoking discussions over morality, legality, and sexuality, the nude has been the subject of various regulatory attempts and much scholarship.

The nude is not, however, only a kind of corporeal representation, but also of sexual representation—that is, imagery which either depicts the pleasures of the body or the body for the pleasure of the viewer. The second half of the chapter will address the

less overtly circulated, if still widely practiced, genre of pornographic imagery which is unequivocally, although not exclusively, concerned with the pleasures of the body. Just as the body depicted as the nude exists within discourses of art and inspiration, the body in pornographic imagery, in contrast, is discussed in terms of obscenity. Discourses of obscenity, however, are not limited to sexual representation, and, through the concept of the grotesque, also apply to images of the non-conforming or freakish body. Though relatively uncommon compared to the body represented as the nude or pornographically, it is imagery of the grotesque or freakish body which most clearly coincides with clinical images of the body. Tracing the overlapping discourses which address these modes of representing the body will contextualize subsequent readings of the clinical image as aesthetic, obscene, repressive or revolutionary.

The reader should note that in this tour of imagery which is variously understood as art, obscenity, and evidence, the images under consideration will not be limited to the photographic. All of the practices under consideration predate photography and contemporary modes of representation draw on historical antecedents. Furthermore, photographers and consumers of photographs also look at non-photographic representations of the body from other genres. For example, the conventions of the painted nude condition the production and reception of photographic images of the body, as can be seen in the ways in which advertising photography has inherited some of its visual vocabulary from oil painting (Berger, Ways of Seeing). As remarked above, genres of corporeal representation and associated discourses overlap and inform each other. The blurred boundary between graphic and photographic imagery is merely further evidence that none of these categories are discrete.

The Portrait as a Representation of the Body

Up to this point I have been using the terms "body in representation" or "corporeal imagery" to describe images of the human body produced in various media and for various purposes. However, it turns out that the category is not self evident. Although it seems clear that historical clinical images taken to delineate some illnesses are representations of the body, it is suddenly less so when one is asked if Roland Barthes's photograph of his mother is an image of the body. Referring to a photo of a co-worker's new baby as an interesting example of corporeal imagery, although technically correct, is probably as inaccurate as it is impolite in terms of common usage. Quite simply, the terms are not generally used in such a way that they include any image which depicts all or part of one or more human bodies. So, what then counts as the body in representation?

Taking as a starting point William Ewing's 1994 traveling exhibition and accompanying text entitled, The Body: Photographs of the Human Form, even a cursory examination reveals one major assumption: the body as a subject of representation is the naked body. Ewing is by no means alone in this. This definition has the advantages of being straightforward and clear, and it appeals to common sense. The major disadvantage, however, is that it paradoxically defines most pictures of people as being something other than images of the body. In the majority of representations, human beings are not naked. The highly sexualized visual culture of advertising, for example, might give us the idea that we are surrounded by images of nakedness, but this is not the case. While some print ads feature unclothed models, those campaigns are often much talked about or controversial. (Consider Kate Moss for Calvin Klein as an example which was discussed in relation to the role of the media in determining the normalcy and desirability of bodies of different

sizes). They would not be if they were not somehow exceptional. Most of the time, models in advertisements, magazines, and catalogues are clothed. In photographs in newspapers, politicians and community members wear clothes. Nudity is not the norm in snapshots. Portraiture, which could be argued to encompass most of the preceding kinds of images, does not generally depict the sitter without clothes.

As attractive as the divide between "naked and not" might be as a simple means to identify which images count as corporeal representation, the assumption that the category of the body in representation necessarily denotes a naked body is problematic. To begin with, as noted above, such a definition automatically excludes most images of human beings from the discussion. Furthermore, it raises the tricky question of what counts as naked. In all kinds of corporeal imagery, the bodies are draped, decorated, or somehow partially clothed. Berkeley Kaite addresses the significance of such adornments as pearls or shoes in terms of erotic presentations of the body and Thomas Waugh does the same in relation to the use of orientalist props in art photographs of young men. Edward Lucie-Smith asserts that "[o]ne of the most important elements of erotic art is not the naked body itself, but the accouterments with which that body is accompanied and surrounded" (170). If veils, drapery, shoes, jewelry, bikinis, and other bits of costuming count, then there are proportionally very few images of naked bodies. Furthermore, with specific reference to this study, many clinical images would be disqualified, because patients are often clothed.

In fact, the more closely one considers the category of the body, the more unstable it becomes. It could be argued that the body is never really unclothed, just as it is never really outside of culture. As our clothes can be read as prosthetic extensions of the body, so skin and muscle can be read as an extension of one's wardrobe. Marjorie Garber's

inclusion of an entire chapter on the surgical construction of gender in her book on cross-dressing is indicative of an understanding of the flesh of the body as sartorial while George Hersey in The Evolution of Allure takes this a step farther. He notes that our word "muscle" is denied from the Latin "musculus" or "small mouse" and suggests that because "bicep" and "tricep" mean "two-headed" and "three-headed" respectively, we can then make the leap to thinking of ourselves as "covered with two or three headed mice, and with smaller and larger creatures that, at least if we are body builders, dart around under our skins, popping up, sliding behind each other, ever on the go, creating a kind of outer carapace of clinging creatures" (167).[2] This vision of muscles as an outer garment made of small animals strikes me as possibly more transgressive and grotesque a representation of the body than we have so far encountered. In the image of the bodybuilder as wearing sort of subcutaneous fur coat, as being mouse-bound rather than muscle-bound is one in which the very category of the body begins to disintegrate. Having taken the idea of clothed and naked to (or past) its logical extreme in order to underline the problems inherent in defining corporeal images as simply those where the subject is unclothed, I would like to return to the original question of what counts as a representation of the body.

The Portrait

Having rejected the most obvious solution, it seems that it might be profitable to turn to a mode of representation which might not be so immediately seen as being about the body. Because portraits are generally understood as somehow managing to convey or

[2] He suggests that favorite muscles might even function as "pets" for body builders who show them off and have them perform tricks!

capture the character of the sitter, they tend to be read as being more about the sitter's interior subjectivity or individual essence than anything else. There is an understanding of the face and head as "not body" and portraits traditionally focus on the face of the sitter. Heirs to a long rhetoric of mind/body dualism, we understand the portrait as belonging on the mind side of the equation and therefore outside of the body in representation.

However, at many points in its development, clinical imagery, which is certainly about the body, bears many formal similarities to portraiture; both feature a frontal stance, even lighting, and relatively neutral backgrounds. Especially in early practice, the images were made by the same photographers, using the same equipment in the same studios. Because elements of the same visual vocabulary are used in both kinds of representation, the portrait makes a more useful point of departure for examining the clinical image than might be initially expected.

The similarities between clinical imagery and portraiture are such that at least one phototheorist has made explicit links between the two. Phototheorist Alan Sekula writes about portraiture as several related representational practices which include clinical photography (Photography Against 226). He makes a distinction between what he refers to as honorific and evidentiary portraits. Rather than relying on a simplistic division between clothed and naked, he bases these categories on how the images are used and understood. He designates the traditional high art portrait with its social functions of celebrating the accomplishment and social position of the sitter the honorific portrait. However, noting the formal similarities between these images and others produced in science and medicine, he chooses to expand the category of portraiture to include images that have not been traditionally read as portraiture because of their focus on the pathological. These images he refers to as evidentiary portraits. As the inverse of the

honorific portrait which foregrounds the sitter's subjectivity, the evidentiary portrait focusses on the body.

This parallel is further explored in The Beautiful and the Damned, where the mutually constituting nature of the two kinds of imagery is underlined. Here both genres are understood as opposite sides of the same coin. Elsewhere, photohistorian Allen Trachtenberg uses Sekula's theories in a subtly different way, emphasizing the similarities between evidentiary and honorific photographs so as to extend the honorific category of portraiture to include oppressive images of the (literally) disenfranchised. He makes an effort to recuperate the Agassiz/Zealy images of African American slaves as honorific images. These images fulfill our immediate expectations of corporeal imagery in that the sitters are unclothed. However, in attempting to draw parallels to contemporary honorific images and thus read dignity under duress and the expression of interior subjectivity into the images of Jack, Delia and the others, Trachtenberg underlines the permeability of the boundary between honorific and evidentiary images. He makes it clear that their initial function as images of the body are a result of the conditions of their creation and subsequent circulation rather than a matter of covering or uncovering the sitter's torso.

While efforts to read dignity in suffering into images of enslaved, pathologized individuals, are laudable as an attempt to overcome a painful history, this is not the space for resistance that Linda Williams and others are hoping to find in the study of repressive image-making practices. Redefinition is a thin practice which does little to challenge the established meanings attached to a given mode of representation. If the vocabulary of the image speaks the language of pathology and otherness, reading it against the grain as evidence of dignified subjecthood does not actually challenge the established ideological connotations of that genre of imagery. In fact, by doing the inverse and amplifying the

objectifying and othering aspects of the photographs in her appropriation of the same images, artist Carrie Mae Weems in From Here I Saw What Happened and I Cried perhaps does more to challenge naturalized otherness than Trachtenberg does in wishing it away.[3]

Furthermore, readings of evidentiary images as honorific are the exception rather than the rule. This is not to say that the boundary between the two is never crossed, rather, the slippage between evidentiary and honorific images tends to occur in the other direction. The tendency towards pathologizing, or rendering evidentiary, honorific images is much more common than the inverse.

It is my contention that when honorific portraits are read primarily for some content other than the sitter's identity and character, such as evidence of pathology, physical beauty, or both, they become images of the body. This change in the terms in which the image is read move it out of the realm of the honorific portrait and into the realm of the body in representation. When honorific portraits are framed as providing evidence of pathology the reading of them as conveying the sitter's dignity, nobility, or social position is overshadowed by discussions of genetic inheritance, ill health or inbreeding. Syphilis, rosacea, and cataract are among the conditions contemporary observers work to identify in portraits. That the "Hapsberg lip" is the most notable feature in images of one royal family is a particular case where the honorific functions of the portrait have been overridden.

Another kind of portraiture which has shifted over time from honorific to evidentiary is the posthumous portrait. Common in nineteenth century America,

[3] In this series she enlarged the original Zealy images, tinted them blood red and added text in which the viewer and the subject are simultaneously addressed as the object of study and anthropological debate. (For a more complete discussion of this piece, see the final chapter.)

posthumous photographs were generally circulated and understood in the same way as other portraits (of the living) (Ruby 159). When someone in the community died the photographer was called in to "secure the shadow ere the substance fade"—especially in the case of young children or infants of whom no other photographs existed. However, in contemporary culture where death and dying have become institutionalized, the production of such images has been stigmatized and existing historical images have come to be seen as a kind of lugubrious Victorian aberration. They have been circulated most widely though Michael Lesy's 1973 book Wisconsin Death Trip (and the recent film version of it) where they framed as evidence of misery, abuse, and madness in rural America. The entire practice, rather than merely the individuals pictured, has been pathologized, as noted by Jay Ruby, author of the first major work on the subject, Secure the Shadow (11). Collector Stanley B. Burns, who will be the focus of the fifth chapter, has produced two volumes, Sleeping Beauty and Sleeping Beauty II, which underline the normalcy of the practice up until the beginning of the twentieth century.[4]

It could be argued that distance in time is part of what contributes to the reading of once honorific portraits as evidence of pathology and deviance. If, as proposed above, the honorific portrait relies on the viewer's understanding of the image as conveying something about the subject's character, this is something that is reinforced through access to outside information. With passing time it becomes more and more likely that the viewer will not have access to the sitter's name, title, or social position, all things which promote a reading of the image as conveying the sitter's subjectivity. For example, while a photograph of my great-grandmother might prompt me to look for family resemblances or

[4] It seems the practice only fades from public view when photography becomes more generally available. With the appearance of simple technologies such as the Brownie camera people are more likely to both have images of their family members alive and well and be able to make their own posthumous portraits if they so desire.

evidence of the stern demeanor that family mythology attributes to her, there would be no similar points of entry for a similar image of an anonymous woman from the same period. Though the subject's anonymity would not guarantee my reading the image as evidentiary, I might find myself speculating about her thin hair or masculine profile.

The pathological however, is only one avenue to the reading of an image as evidence. The foregrounding of beauty or sexual attraction can also effect this movement from "honorific portrait" to "image of the body." Generally speaking, images that are concerned with beauty and attraction are not read as honorific portraits.

If one considers the fact that overt female sexuality has been read as pathological, and female bodies read as vectors of moral and physical disease (Harrowitz; Shorter; Harding Introduction), it is no surprise that the pathological and the sexual function in parallel ways to define an image as concerned with corporeality rather than subjectivity. An example in recent photographic practice of a body of work in which both the sexual and the pathological alter the reading of honorific images are Diane Arbus's portraits. Her entire body of work occupies the liminal space between the honorific and the evidentiary, with part of the interest arising from the discomfort of images that are neither fish nor fowl. The viewer is left oscillating between looking for the portrait's promise of the ineffable individual character of the subject and discerning traces of the pathological, the sexual, or both (Lee and Pultz).

While the connection between the sexual and the pathological is evident in overtly clinical or scientific projects such as Lombroso's criminological studies of prostitutes or sexological studies of lesbians and homosexuals (Terry, An American Obsession), the search for the pathological in the sexual is not limited to science. It also filters into the domains of art history and criticism.

There is clear evidence of this tendency in readings of portraits of women by Max Nordau, an art critic, doctor, and disciple of Lombroso who was active between 1883 and World War I. Nordau brings together the pathological and the attractive in his diatribes against what he sees as decadent, degenerate and atavistic portraits, discussing them in terms which foreground the presence of the sitters' bodies. Women painted by James Whistler are described as being "perverted whimsical beauties" who, except for their faces and hands, "reveal not a finger's breadth of skin, yet, in spite of the interposition of silk and lace, cry out for the fig leaf" (Nordau in Hersey 137).[5] Nordau further explains that the women pictured are:

> bundles of sick nerves that, from the crowns of their heads to the tips of their fingers seem to thrill with Sadic excitement. It is as though they wanted to entice men (into) wild attempts, and at the same time held their claws ready to tear, with a loud cry of pleasure, the flesh of the daring ones" (Hersey 137-8)!!

The idea that a painted clothed body might "cry out" for a fig leaf brings the figure of the nude back into the discussion. It seems that when the human being pictured is be presented in a way which emphasizes body-ness rather than self-ness it is considered under the rubric of the discourse of the body, whether or not it is clothed.

This tendency and its associated misogyny is not, however, merely an early twentieth century oddity. George L. Hersey, Yale art historian, and author of the 1996 text, The Evolution of Allure, overtly builds on Nordau's theories and effects the same evidentiary shift. Hersey describes the Whistler portrait, Valérie, Lady Meux (1881), in the following manner:

[5] One version of the rational man versus corporeal women is in Milton's description of the originators of the fig leaf look. Adam, he says, was built for contemplation while Eve was made for "sweet attractive grace."

> Lady Meux does wear sexually selective clothing—a rounded satiny dress with tight sleeves and mauvish bodice, the latter being stiffened into a protuberance that frames the pubic area in a dramatic arch. An equally dramatic train of coruscating satin swerves up from the base of the skirt to the rump [...]. Down the middle of her generous bust, meanwhile, a row of tiny buttons goes through the splash of darkness under her breasts. (138)

Giovanni Boldini's Consuelo Vanderbilt, Duchess of Marlborough (1906), is likewise described as "sensuous," as having "bright lips set hard with smiling lascivious disdain" and as wearing clothes that are "a mere scribbled carapace for her flesh" (Hersey 141).[6] The interpretation which foregrounds feminine beauty and sexual attractiveness results in a kind of reading of bodily presence that is not at all characteristic of formal portraiture. Hersey, like Nordau, is wishing away the women's clothes, so that these portraits may be read as nudes. This objectifies the sitters, foregrounding attractiveness over individuality and character, and emphasizes physical presence as evidence of pathological Kafkaesque sexual promise. That these readings draw on the language and assumptions of science, appealing to discourses of health and sickness, sexology, evolution and sexual selection, attests the power of science as a tool to other and objectify. That honorific portraits of identified individuals are read as being composed of breasts, pubic areas and rumps attests to the fact that the line between clothed and naked is a function of how an image is received and circulated rather than any inherent

[6] The reader might care to take a look at reproductions of these images, which are not nearly as titillating as they sound. I would suggest that it would be highly unlikely to find them in a collection devoted to images of the body.

characteristics the image.[7]

So, by starting with the question of what is included in the study of "images of the body" we are beginning to arrive at a definition of the field. Although it appears at first glance that the category of images of the body is largely defined by whether or not the person pictured is clothed or naked, it becomes clear that inclusion in the category has more to do with how the image is framed and circulated. Evidentiary portraits which normally foreground the sitter's physical characteristics can be read for interior subjectivity and honorific images can be recontextualized in such a way that the body is recuperated. As noted above, the latter shift is more common, with discourses of pathology, beauty and/or sexual attractiveness functioning to shift pictures of human beings from functioning as honorific portraits to being read as evidentiary images of the body.

If the sexual and pathological are two main routes by which the honorific portrait can be absorbed into the category of the body in representation, it should come then as no surprise that the sexual and the pathological both inform the other dominant genres of the body in representation. In high art, the category of the nude and in low art, pornography, are concerned with the sexual, while medical, ethnographic or anthropological images are concerned with the pathological. This is not to suggest that these categories are sealed off from each other. In fact, there is a considerable fluidity in the way discourses overlap and appropriate images from other categories. It would be an error to assume that only images belonging to high art or pornography ought to be included in the field of sexual

[7] If it is then occasionally possible to recuperate the body of the subject of the portrait so as to read the image as a primarily corporeal representation, we could ask if the reverse is also possible. Although some images of bodies without heads (a relatively modern phenomenon) are labeled as portraits, it is a rare move, which somehow smacks of the uncanny. Consider, for example, Stieglitz's images of Georgia O'Keefe or some of Harry Callahan's "Eleanor" series. Both strike me as existing on the very fringe of portraiture. Images of undressed individuals which include their faces seem to make a more convincing claim to the genre, though they also seem to exist in a kind of liminal state.

representation, and the assumption that the erotic is the only pleasure in the representation of the body (with all other reasons being alibis) is equally limiting for a complex consideration of a territory which includes images from science and sport. From Foucault we know that the pleasures of knowledge and power are equally desirable (Williams 3, 39). Keep these observations in mind in the examination of studies of the nude which follow.

The Nude

To continue the metaphor of mapping the terrain of the body in representation, one of the major fault lines is the result of the sort of binary thinking which supports a split between mind and body, or honorific and evidentiary. This distinction haunts the entire discussion of the body in representation. Although this kind of either/or logic can be seen as an artificial imposition which oversimplifies complex and contradictory subject matter, as a framework, or a point of departure, it can prove useful. We have already seen this process at work in identifying portraiture as existing at the margins of "representations of the body" and then proceeding to ask what characteristics allow the movement of an image from one realm into the other. This strategy is not limited to critiques of representation. In the first chapter we saw how Haraway employs a similar strategy in questioning the divide between subject and the object with the result that the power relations inherent in traditional definitions of science are denaturalized.[8] Furthermore, it has been widely acknowledged in cultural studies that the spaces at the borders or boundaries between categories can be productive in attempts to delineate or

[8] As will become clear below, this is not the only case where the theoretical insights of the critics of science find their twins in scholarship on representation.

redefine a field of inquiry. Papers on hybrid identity (Marshall), cyborg theory (Haraway), prosthesis (Grosz), liminal spaces (Anzaldua) and multidisciplinary projects of all kinds (Ross) employ this strategy. In what follows, the oppositional pair of naked and nude, as defined by Kenneth Clark, and the liminal spaces between these terms will serve as a framework for discussing the body in representation.

The figure of the nude in high art is the term against which other kinds of corporeal representation have been subsequently defined. Unlike the portrait, the nude is unproblematically understood as an image of the body. Framed by discourses of beauty and attraction, it is rarely, if ever, understood as portraiture. Nudes are not hung in the portrait gallery, even when they depict clearly identifiable individuals. Other evidence that the nude is considered body and not self is found in the fact that the women depicted are rarely identified by name, and are referred to instead as mythological or allegorical figures, studies, or simply nudes. None of these categorizations encourage the reading of these images as conveying the sitter's interior subjectivity. Overtly circulated and studied (and more likely to lead to knighthood than studies of the grotesque or the pornographic) the nude is almost identical with traditional fine art practice in the popular imagination. In terms of accessibility and acceptability, it was possibly outstripped only by the National Geographic as a provider of images of the unclothed body.

However, despite the centrality of the nude in nineteenth and twentieth century art practice, Lynda Nead, in her landmark study, The Female Nude (1992), notes that the field has been relatively untouched, with the exception of Sir Kenneth Clark's The Nude (1956). The absence of other major works on the subject has allowed Clark's text to enjoy what she refers to as "an astonishingly extended life, without meeting with any serious or sustained challenge to its critical premises" (Nead, The Female Nude 2). Clark's text and

Nead's response to it provide a starting point from which to examine how the naturalized binary distinctions which have characterized the discussions of the nude subsequently conditioned the reception and analysis of other kinds of corporeal representation.

The first pair of oppositional terms which Nead addresses in discourses surrounding the nude are male and female, and the assumption that these signify subject and object respectively. In the title of her study she draws attention to the way the category of "the nude" has come to be identical with the female nude. This slippage is evident in Clark's text. Despite the chapter on the male nude (to which he ascribes different characteristics than the female nude[9]), it becomes evident that, in speaking of "the nude" without specifying the gender, Clark is assuming a female nude and a male viewer. This focus on the female is partially a reflection of the decreasing frequency with which the male nude appears in the canon over time, but the way in which Clark naturalizes this shift suggests an essentialist view of femininity which makes women the natural bearers of the gaze. Clark posits that the female form is of greater inherent formal integrity/interest (smoother transitions and satisfying geometrical forms, the oval, the ellipsoid, the sphere) to the artist who is additionally drawn to the subject because of what Clark refers to as "the tug of normal sensuality" (48). For Nead, in this "moment when the female nude becomes simply 'the nude' [...] the male identity of artist, connoisseur, creator and consumer of the female body is fully installed" (13).[10]

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[9] Nead notes that they are almost identical with Freikorps ideology (The Female Nude 17).

[10] Interestingly, although Abigail Solomon-Godeau reinstates the male nude and the construction of masculinity in elite visual culture as the subject of study in Male Trouble: A Crisis in Representation, the male figure of the artist, connoisseur, creator and consumer is not displaced. In this inquiry which "takes as its starting point the assumption that the image of ideal manhood is as much the product of fantasy, and certainly of ideology as the more familiar icons of eroticized femininity" she considers the dynamics of the male gaze in relation to the male body (9). Her text also affirms that the ideals of restraint and containment discussed below in relation to "the nude" were also very much at work in these late seventeenth and early eighteenth century images. See her chapter, "The Political Economy of the Male Nude" for a discussion of how this ideal of containment finds expression in the modest (read small) proportions of male genitals in high art (177).

Having defined the body in representation through the mutually exclusive and defining pairs of masculine and feminine, subject and object, Clark further defines this representational body, "the nude" against its negative "other," the naked. The nude is the body in representation, the body as it is produced by culture, while the naked is somehow posited as unformed corporeal excess, as the body outside of representation (15). In relation to other dualisms, the distinction between naked and nude puts the naked or unmediated body on the side of the feminine (nature, objectness, passion) and the nude on the side of the masculine (culture, the subject, reason) (Nead, The Female Nude 14).

Nead finds in this distinction between naked and nude an encapsulation of Clark's understanding of the function of the nude. The shift from the naked to the nude represents a transformation from the actual to the ideal, showing why it is that Clark sees the nude as "the most complete example of the transformation of matter into form" (Clark in Nead, The Female Nude 14).[11] It is evident that Clark delights in the alchemy of the artist who effects this most complete transformation, changing the base metal of (female) corporeality into the gold of high art. The transformative nude is a means of containing unruly, "natural" bodies (2).

Although the clinical image has been often understood as a completely transparent means of representing the body, merely showing the unruly body in its natural state, it could be argued that the body undergoes a similar transformation when the clinical photographic eye is turned on it. Rather than defining and containing the "natural" body by turning it into high art, when speaking for nature, science and medicine transform the

[11] Setting up the nude and the naked as binary opposites renders the terms mutually exclusive, but also mutually constituting. Put simply, the existence of one implies the other. For a very smart explanation of how terms constitute and are constituted by their inverse and opposite terms see Judith Butler's "Imitation and Gender Insubordination." Or, according to Derrida, "Difference produces what it forbids, making possible the very thing that it makes impossible" (in Batchen 179). Similarly ideas of sexual liberation (or resistance) and repression are inseparable and function in terms of the discourses of bodily representation like two sides of a coin. One does not exist without the other. "Heads" automatically implies "tails" just as the exercise of power implies resistance—even if it is not evident at that instant.

body into an object of knowledge. Again, the body, coded as feminine, if not actually female, is contained, codified and controlled. However, it is not only through metaphor that the discourses of the nude come to be applied to clinical images, as will be discussed later in the chapter on collection and connoisseurship.

Of course, whether discussing the body as it has been represented in art or in science, the suggestion that there is a semiotically innocent, unmediated body outside of representation is problematic. The idea that there exists a pristine, unmediated nature outside of culture has been subjected to significant critique in Feminist Science and Technology Studies (STS). The theoretical basis for the rejection of a nature unmediated by culture also supports Nead's assertion that the body is always already in representation and is "dense with meaning through social and cultural and psychic formations" (Nead, The Female Nude 16). Not only is the object of study inextricably culturally embedded, so is the position of the observer. STS further critiques the existence of a place outside of culture from which scientist-hero-geniuses can exercise their privileged vision.

The insistence on the culturally embedded nature of scientific and artistic practice is a stronger position from which to counter Clark's distinction between naked and nude, and his valorization of the latter, than that taken by various authors in the 1970s. Influenced by counter-cultural ideas and the sense that revolutionary change was possible, these texts propose representation of the body as a vehicle for revolution and change. Here, the revolutionary body is at least tacitly defined against the figure of the nude, the represented body of high culture. As such, these authors long for, or even rely upon the existence of, the body outside of culture, the semiotically innocent body.[12]

[12] I suspect that this is exactly the kind of Utopian resistance about which Foucault is (justifiably) pessimistic.

Of the texts under consideration here, the most sophisticated challenge to Clark's system is John Berger's widely circulated Ways of Seeing. Berger examines how ideas circulate in culture and how social values are transmitted through representation. Having taken into account how images can speak the languages of capitalism and patriarchy, Berger desires a kind of representation which is not mediated through these and allows the person pictured to remain herself, rather than becoming an objectified commodity. In his efforts to realize this, Berger reverses Clark's terms so that nakedness is the valued state in which one can be oneself, while the nude is the body subjected to pictorial conventions (Berger 54). While this reversal questions Clark's values (preferring to value love and human connection over transformative aesthetics) it preserves the nude/naked binary structure. Like Trachtenberg's reading of the Agassiz/Zealy portraits, Berger's reading of Rembrandt's pretty young wife as nakedly herself rather than an idealized nude, seems an effort in wishful thinking where repressive modes of representation can be escaped through redefinition.

As noted above, some of Berger's contemporaries engage in the same kind of hopeful redefinition without Berger's careful consideration of how images circulate in culture. A special edition of Aperture published in 1970 entitled Be-ing Without Clothes[13] is one such example. Eschewing the nude/naked distinction,[14] the author proposes a third term to designate the body outside of culture and thus start the discussion on entirely new ground. Neither naked nor nude, the reader is told, the images in this text depict bodies in a state of "be-ing." Unlike nakedness, which in this system is at best an inarticulate cry of protest, the body in be-ing is described as simultaneously a vehicle for

[13] Edited by Minor White who may be the unidentified author.
[14] The unidentified author's description of nakedness as a counter-cultural "weapon of the young, often used to express disgust, disapproval or even revolt" (8) nonetheless suggests an affinity with Clark's definition of nakedness as being outside of culture—somehow disruptive to the status quo

personal and cultural transformation and liberation and as merely itself, unmediated and precultural.

The emphasis on the transformative powers of be-ing provides an interesting parallel to Clark's work, despite the explicit rejection in the text of the distinction between naked and nude (56). At the level of the individual, we are promised that this state of be-ing leads to inner stability (86). At the societal level it is proposed that if societal "hang-ups" responsible for an understanding of the body (and sexuality which is inextricably entwined with it in these discourses) as obscene could be circumvented, then the liberatory potential of bodies and pleasures could be unleashed. The claims made by the author are extravagant and the text is written with such fervour that, at times it seems as if it were created for purposes of conversion.

This proselytizing tone is also evident in the catalogue essay which accompanied the first international exhibition of erotic art organized by psychoanalysts Drs. Phyllis and Eberhard Kronhausen in 1968. The Kronhausens share Minor White's assumption that a new openness about nudity/nakedness, sexuality and sexual representation would result in personal and cultural transformation. Culture, identified as the source of "hang-ups," needs to undergo radical transformation if people are to live freer and healthier lives. Like be-ing, the Kronhausens believe that the response to the unclothed body in representation will spark this transformation. This claim is supported by anecdotes in the catalogue which show very young children's "pre-cultural" responses as exhibiting the sort of natural, uninhibited, healthy curiosity about representations of the body to which we all should aspire. As in be-ing, the self and society are to be transformed through radical corporeal representation.

Clark sees the nude as the epitome of cultural achievement; White and the

Kronhausens see the body in representation as the tool with which to topple that culture. Representation is seen as a transformative, revolutionary tool, but precisely how these authors understand it is difficult to pin down. As noted above, while Clark claims for representation the power to elevate the material to the spiritual, and Berger demonstrates how representations exist within a historically and culturally specific web of images, the schemes of White and the Kronhausens rest on naive and contradictory definitions of the body in representation. Be-ing posits a spectacular body devoid of representational antecedents, while both texts treat the process of representation as simultaneously transparent (that is merely showing reality) and transformative.

While, for Clark, transformation results from the mechanisms of representation which change naked to nude, it is the mere existence of the body in be-ing or the sexual/unclothed body in representation which spark personal and cultural transformation. Neither text takes into account the way in which these desired (inner) states might be depicted or even distorted through representation. The images published in Be-ing are presented as evidence of a new project of photographing "the presence of thought in the body" that will vitalize the whole human being. Be-ing demonstrates a naive use of photography as medium which will record truthfully and objectively interior and exterior states. It is as if the producers of Be-ing are assuming that if the artists' intentions are good (or if they have the correct tendency) then their work will automatically be revolutionary in function, an idea that Walter Benjamin rejected in "The Work of Art in the Age of Mechanical Reproduction" half a century before. The Kronhausens are likewise generally unconcerned that the images in their exhibition are mediated by the artists' means of production. Much as Kinsey had collected sexual and pornographic imagery with the understanding that it provided truthful representations of

sexual practice (Crump), the Kronhausens seem to consider the paintings and drawings in their exhibition as a kind of window on the bedroom, if not the world. Representation here seems to be merely a way of showing what is.

This naive understanding of the body in representation, as simply showing what is, is most disturbing when one considers what these images depict. These texts, which champion an overthrow of the dominant culture's hegemonic definitions of sexuality and art, replicate some of the most repressive characteristics of high art and culture. For one thing they replicate the sexism of Clark's definition of the female nude as being the natural bearer of the gaze and, more troubling, they are at times deeply misogynistic. The author of Be-ing approvingly describes one artist's practices as steadily evolving "from photographically stripping a woman to imagistic dismemberment of her body" (74). The erotic art in the Kronhausen exhibit consists primarily of images of women made by men, including Hans Bellmer's doll-inspired, blank-eyed creatures who manage to simultaneously display all orifices. Furthermore, framing them in such a way that they are understood as truthful reflections further naturalizes these tendencies, making them seem eternally truthful rather than culturally specific and thus mutable—not an ideal staging ground for any revolution. Rather than exploding what came before, these efforts to radically redefine the terms of bodily representation tended to collapse back into established patterns.

Nowhere is this more evident than in the fact that, despite a general rejection of any theoretical consideration of processes of representation, both projects are still deeply invested in the transformation of low corporeal matter into high spiritual representation which informs the project of the classical nude. In this contradictory move, the authors simultaneously desire transparent representations of bodies as they are, and the

transformation from naked to nude. The Drs. Kronhausen report being awed by the "transformation of pornography into art" performed by Bellmer, saying that "before our own eyes" (just like a magician) he made a "complicated and highly erotic engraving from a series of common pornographic photographs" (Kronhausen in Nead "Above the Pulp Line" 153).

The photo-work in Be-ing is described as "a concerned force in the spiritualization of man" (58). This belief in the transmutation of low desire into high spiritual growth or insight is manifestly clear in the following passage from Be-ing:

> If the photographer and the model are of different sexes, both parties are likely to feel stimulated, energized, and vivified, rather than tired after a camera session. Painters and photographers are often moved to have sex after intensively photographing or painting the naked figure [...] the sex stimulation may be turned to its other function, the nourishment of inner growth (through meditation)[...] in fact, the quality of the thought determines whether intercourse is stimulated or the spirit fed. (61)

This passage reflects the basic assumption behind the production of the classical nude that the unclothed body is a fountainhead of inspiration and artistic expression (Nead, The Female Nude 33). Furthermore, this opposition of insight or orgasm duplicates the territory negotiated by the nude—art and the obscene.

Before following the trajectory of this new term, the obscene, I would like to underline the fact that the discourses outlined above surrounding the nude in art are by no means only historical artifacts. Even a cursory glance at the photo magazines at any newstand make it clear that the fantasy of turning the dross of the (usually female) body into the gold of the idealized nude is central to project of photography as it is commonly

practiced. This supports Solomon-Godeau's observation in the previous chapter that modernism and its project of transforming the world into aesthetics or pure form is alive and well. Evidence of this can be found in recent work such as Canadian artist Michael Torosian's body of work which he originally had titled Meditations on the Nature of Beauty but later retitled Anatomy. Each title suggests a transformation of the body—the former into an object of aesthetic enjoyment, the latter into an object of knowledge. That the artist feels that titles which suggest aesthetic meditation on one hand and scientific scrutiny of the body on the other may be used interchangeably without any alteration in the images produced is, like Nordau and Hershey, another example of what might at first be considered the unlikely coincidence between artistic and scientific discourses.

Torosian's body of work consists of black and white prints of the same woman's naked torso. Her face is consistently cut off by the top of the frame. He refers to her as his collaborator but she is never named. He sees his work as part of the tradition of modernism, existing in a continuum with Steiglitz and Weston. He states that he is "stimulated to work with the nude body because of the infinite combinations of lines which are presented" (Torosian 6) and because it allows him to "cut everything to the aesthetic essentials" (75). It is his project to reinject "emotion" into formalism and depict his model in "all the seasons of human emotion" (79). He continues in this vein at some length. Most telling however, is his statement that "the aesthetic of the nude as form, however, provided for idealization, elevating the body to a sanitized plane" (21). This positions him directly where he wants to be, as an inheritor of the grand tradition of the transformative nude. What Torosian may not recognize, however, is that tradition functions in a bivalent manner. Although a seeming position of strength, it also involves a certain surrender. Cultural theorist Raymond Williams notes that "[i]n the transmission

and acceptance of statements, beliefs, rules and customs that constitute a tradition, there is also always a relinquishing or surrendering of alternatives" (Nead, The Female Nude 44). The alternatives he is relinquishing here are access to a practice that does not rely on the objectification of the other, and the reification of sexist stereotypes.

Allen Ellenzweig in The Homoerotic Nude, published in 1992, falls into the same trap in some ways. In attempting to position photographs of the nude male body as always already part of the canon, he winds up speaking about them in the language of formalism. I feel that some of what he gains in terms of establishing a new level of visibility for certain kinds of gay male art photography, he almost immediately loses in the rapturous descriptions of the bodies pictured as conglomerations of "perfect spheres" and "sinuous lines." Sometimes it is not profitable to use the master's tools. In adopting the language of formalism Ellenzweig embeds homoerotic images in discourses of modernism which leave little, if any, space for content-based discussions of the picturing of non-dominant sexualities.[15]

I would like note that so far we have seen little evidence of spaces for resistance from which one might effectively counter the discourses of the nude in high culture. Even those, like White, Torosian and Ellenzweig, who look to reject outright, renovate, or appropriate the modernist discourses of the nude only end up reifying Clark's foundational assumptions. If it seems that, at least for the moment, the dominant discourses of high art leave little space for resistance, perhaps such space might be found in art's inverse—the obscene.

It has been widely acknowledged that cultural objects which move us are defined as existing outside of high culture. Writing about the pornographic, Linda Williams (3) and

[15] Waugh notes that there has been a tradition of evacuating the erotic from homoerotic fine art practice in order to make it more acceptable in the canon of high art, stating that it is his project to "refund the price these pioneers have paid for the high cultural enthronement of homoerotic photography and cinema" (60).

Richard Dyer (Waugh 6) both cite melodrama and horror as two genres of film which provoke bodily reactions (tears, shivers) and are considered low art. In the discourse of the nude, the obscene is the opposite of the classical containment of high art. Obscenity is that which moves/arouses the viewer, in opposition to aesthetic appreciation which brings about stillness/wholeness/contemplation. Clark, in rejecting the obscene, states that it belongs outside the canon because "the moment art becomes an incentive to action it loses its true character" (Clark in Nead, "The Female Nude" 280). Though Clark seems to be speaking of action in erotic terms, read literally, his definition not only excludes the erotic, but also denies the possibility of a politically engaged, activist art practice. If it is obscenity rather than art that is the incentive to action, then surely that is where this examination should lead.

The category of the obscene in relation to the representation of the body is iterated though two discourses: the pornographic and the grotesque and the possibility of some kind of intervention in the assumptions which are foundational to the category of the nude exists in both.

The Pornographic

As the inverse and opposite (and thus constitutive term) of the nude in high art, pornographic representations of the body show what has been repressed in dominant cultural corporeal representation. This characteristic of the pornographic could be what motivated the countercultural readings of the naked body as radical. You will note, however, that neither the author of Be-ing nor the Kronhausens define their exhibits as pornographic, seeing that, perhaps, the negative associations of the term would interfere

with the circulation of both the images and ideas associated with them.[16]

The way the Kronhausens, and others, negotiate this problem is to refer to images of naked bodies as erotic. Although the term is much debated in relation to issues of censorship, it does not seem productive to spend a great deal of effort trying to draw a line between good (erotic) and bad (pornographic) images of bodies and pleasures. It seems that any distinction between the two is shifting, arbitrary and probably a matter of degree rather than kind. Nead's claim that the erotic is "a more significant site of judgment and contestation than pornography" because "if you redefine the erotic, you redefine art and pornography" (Nead, "Above the Pulp Line" 154) while probably correct, is really only interesting if one is trying to define art and pornography as separate spheres. While the distinction is a practical consideration in terms of the legal system (for example, for those trying to get books across the border or mount an exhibition of erotic/pornographic art), I do not believe that the division between the erotic and the pornographic is significant in terms of identifying practices which are opposed to or intervene in dominant discourses. Nead's observation that the erotic element in the nude functioned as a kind of test in which the viewer comes into contact with, but resists the destabilization of, the obscene, could be equally true of less "tasteful" images of bodies as well. Her question, "[w]hat better way to demonstrate your cultural disinterestedness and superiority than to come into contact with the erotic and to be—practically—unmoved?" (Nead, "Above the Pulp Line" 147) seems to apply also to other kinds of sexual or extreme representations of bodies.[17]

However, while the division between the erotic and the pornographic might be

[16] Especially considering that these projects were undertaken only in the very early 1970s, before porn was accorded any kind of mainstream status at all, as occurred with the release of Deep Throat.

[17] The popular success of the movie Deep Throat in the 1970s might have been the result of such a phenomenon and the reemergence of the freak show in the 1990s with acts like the Jim Rose Circus Sideshow seems not unrelated.

relatively unimportant to a contemporary activist, it has been extremely important in the past. Anti-porn feminists, most famously Catherine MacKinnon and Andrea Dworkin rose to prominence in the 1980s identifying the repressive and controlling functions of pornographic images. This gave rise to critiques in the 1990s which considered the ways in which pornographic imagery might function as a kind of resistance to dominant and repressive narratives of sexuality. Alarmed at MacKinnon's and Dworkin's consistent construction of woman as victim, sex positive feminists such as Susie Bright and Shannon Bell began writing and speaking about the possibilities and pleasures of sex and its representation, while others began trying to create alternative kinds of erotica/pornography by and for women.

Within the academy, the primary example of the recuperation of spaces for resistance within what was largely seen as the repressive practice of pornography is Linda Williams's Hard Core. By addressing the actual texts of pornography rather than the issue Williams found in the discourses of pornography some liberatory potential, while not falling into the traps of making excessive, utopian claims we have already seen (Williams 29). She framed her project in terms that are quite similar to this one, saying that an understanding of how pleasure and power function in discourses in which women's bodies are the object of knowledge or representation is crucial to efforts to alter the dominance of male powers and pleasures (xvi). Despite the escapist nature of the genre (155) and the rather facile solutions which these films offer to the real problems of power under patriarchy (171), Williams found a point of resistance in the fact that the issue of sex and female pleasure is being posed as a problem in need of a solution. She pointed out that it not only poses a question largely absent from other discourses of the body, but non S/M hard core might well be the only genre which does not regularly

punish the women for actively seeking sexual pleasure (209).

In this study, Williams also uses this particular form of bodily representation to suggest that activity and passivity have been too rigorously assigned to separate gendered spectator positions (205) and that porn can involve a fluidity of identification not generally assumed in film theory. Rather than assume that each sexual predilection has its own kind of representative porno, she says, it seems more apt to assume that pornographies are becoming part of the process by which spectators discipline themselves to enjoy different pleasures (315). In fact, she is not alone in this suggestion. It seems that the representations of the body informed by pornographic discourses which are identified as being particularly rich as sites of resistance are those which refuse the dominant/binary genders and sexualities of mainstream pornography (and film theory). Straayer, Williams (in an earlier article published in 1993), McClintock, and Kipnis, all read representations of S/M, fat, transvestite and transsexual bodies and pleasures in this way.

Furthermore, like other kinds of representations of the body, pornography also demonstrates a conflicting desire for images which are simultaneously true, showing us the "real thing" and images which transform. In photo essays, the gardener or the lonely housewife suddenly become the ideal partner and the attributes and abilities of the body are expanded beyond most people's experience.

The overt circulation of explicit representations of gay and (possibly to a lesser extent) lesbian bodies and pleasures has further liberatory potential. Describing overtly gay images as being a kind of "cement of the community" (Waugh 32), Waugh reproduces such photographs in Hard To Imagine: Gay Male Eroticism in Photography and Film From Their Beginnings to Stonewall as a way of recovering a repressed history. The

pleasures in making visible what has been deemed outside representation in high art and other discourses are palpable, with overt circulation possibly doubling the liberatory potential of materials that once only circulated covertly. Williams notes that for men in particular, "with a whole culture and history to reclaim, gay historians and critics have engaged in a [...] celebratory form of criticism" (x).

This celebration, however, occasionally can result in a disavowal of any repressive function of such imagery —something to guard against. For example, when James Crump dismisses the functioning of control and repression in relation to explicit gay male imagery collected by the Kinsey Institute, it is clear that a complex understanding of how these might function is not addressed in his project. He neglects the fact that control and repression are not necessarily intended effects saying that they "hardly characterized Kinsey's interest in photography" (2). Even if Kinsey had the best intentions in the world, the ideological effects of a practice are not governed solely by the intentions of its practitioners. The fact that a great number of images in the archive were received from police departments which had confiscated them shows how Kinsey and his archive are implicated in the overt, repressive exercise of power. It is also interesting that Kinsey assumed that the pornographic images he collected were inherently valuable as documents which depicted what people actually did. Essentially, he treated snapshots made for private use, fine art images, and commercially produced pornographic images as being transparent, true clinical images, and neglected the elements of fantasy, aesthetics and commercial gain which motivated their producers as much as any documentary impulse.

The Transgression and Resistance: The Grotesque Body

Really it comes as no surprise that the pornographic body overlaps with the grotesque. The body in explicit sexual imagery does have many of the hallmarks of the grotesque—the "beast with two backs" could be read as echoing Susan Stewart's definition of the freak body in that it involves a blurring of the boundaries between human and animal, self and other and (sometimes) male and female. Laura Kipnis in Bound and Gagged also addresses the carnivalesque function of porn in relation to her reading of Hustler magazine (131-4), saying that it breaks the boundaries of good taste, showing what is effaced in polite culture. The excess of hard core or explicit representations is symbolically transgressive in the same manner as the grotesque.

Mary Russo in The Female Grotesque defines the grotesque body as "open, protruding, irregular, secreting, multiple and changing" (62) saying that "it is identified with non-official "low" culture or the carnivalesque, and with social transformation" (8). In other words, "the images of the grotesque body are precisely those which are ejected from the bodily canons of classical aesthetics" (6) which were outlined above and are seen as elevating the body to Torosian's sanitized plane. Russo even addresses the carnivalesque underpinnings of the counter-cultural practices of the late 1960s and early 1970s (as promoted in Be-ing), noting that, at the time, the carnivalesque suggested unlimited cultural and social transformation (56)—a promise that was not realized to the extent that its proponents had foreseen.[18]

[18] My own view of sixties counter-culture was very much influenced by my childhood reading of the Last Whole Earth Catalogue. Although still filled with useful information about macramé, raising goats, conducting funerals at home, growing illicit substances and casting Rock Stars' privates in plaster it was evident that the drawbacks of communal living, free-love, and other day-to-day enactments of the carnivalesque had not been at all successful. My introduction to the utopian dreams of the era was through a publication which was torn between advocating its earlier ideals and picking up the pieces.

Not falling prey to the same tendency of overvaluing the potential of the carnivalesque as a means of intervention, Russo notes that there are dangers as well as possibilities, before continuing to make claims for the potential for social transformation in the representation of the grotesque or transgressive body. To begin with, the connection between the female and the grotesque is such that (despite cultural feminism's embrace of the Earth mother) it is an "easy slide from here to misogyny" (2). As well, the frequency and the intensity of the association between the female and the grotesque suggests a mutually constituted genealogy such as that between devalued groups noted in chapter one (12). So, although the grotesque can be a place of possibility (16), it can also be a site of repression. This repressive function is not limited to the category "women"—as Russo points out, there are interactions between male homosexuality or marked ethnicity and the aesthetics and iconography of the grotesque (12). This repression functions through normalization (which Foucault has argued is one of the great instruments of power) where that which deviates (the grotesque) is targeted. This has been harsh and efficient in the implantation of compulsory heterosexuality and the concomitant calibrated differentiation of female and male bodies in the service of a homogeneity called gender difference (enforced by what de Lauretis calls "technologies of gender") (Russo 12). Consider, for example, the effort that has gone into reassuring people that feminists are normal women—a process which concedes much to the misogyny which promotes the fear of losing one's femininity and so on, while leaving uninterrogated the terms of normalcy (12).

Russo's suggestion that a cautious embrace of the grotesque might serve us better than this frenzied disavowal of difference (which has been less than widely accepted anyway) makes some sense. It might be productive for women (and members of other

non-dominant groups) to ask how the female grotesque can be used affirmatively to destabilize the idealizations of female beauty (as in the category of the nude), or to realign the mechanisms of desire (65). Russo asserts that although a temporary loss of boundaries might only serve to redefine them, it is possible that in that redefinition there might be some renegotiation or change. The figure of the disorderly woman does undermine dominant/existing social structures. Russo adds that "[t]he extreme difficulty of producing lasting social change does not diminish the usefulness of these symbolic modes of transgression" (58).

This balance of optimism and pessimism in relation to the potential of one of the constitutive discourses of corporeal representation provides a salutary model for theorists and producers of sexual and corporeal imagery including myself who wish that resistance was as straightforward as utopian claims might make it appear!

The grotesque is identified with excess and the blurring of boundaries and Russo identifies in these the possibility of bodily performances and presentation which might escape the rigid boundaries of gender and sexuality. At its most straightforward, the physical excess of fat and blurring between self and other in the pregnant body have been read by some feminists as transgressions of unified subjectivity. Russo also identifies the grotesque in the less immediately corporeal concept of masquerade. Masquerade, as formulated by Joan Rivière and, subsequently, Mary Anne Doane, is the unbounded, excessive, performance of gender—which exceeds the boundaries of normalcy. In terms of this excessive femininity, Russo states that while "the deliberately assumed and foregrounded femininity as a mask for a man is a take-it-or-leave-it kind of proposition; for a woman, a similar flaunting of femininity with a vengeance suggests the power to take it off" (70). This formulation of the excess of the feminine masquerade as calling into

question the naturalness of gendered performance appeals to me. Actually, the performance of male-to-female drag, or the reverse, could also be read as belonging to the grotesque in that, in addition to the excess associated with some performances such as drag queens, it also blurs the boundaries of naturalized gender.

Chris Straayer in an article entitled "Transgender Mirrors: Queering Sexual Difference" makes a similar connection between the category of the grotesque and the performativity of gender, albeit in a much more nuanced form.[19] Straayer does not limit the practices of excess and the blurring of boundaries to the realm of performance (which Straayer and Judith Butler note is often mistakenly read as a kind of "surface" activity that can be put on or taken off on a whim like a suit of clothes). Citing Elizabeth Grosz's Volatile Bodies, Straayer reinjects the corporeal into the equation. She asserts that the material texture of the body affects the formation of subjectivity and the performance of gender (153). Using the example of Juggling Gender (1992) a video about Jennifer Miller, a woman who wears a full beard, Straayer asks us to consider how her beardedness has altered Miller's gender.[20] This is part of Straayer's larger project, aimed at disputing binary sex and the sex-gender matrix. In Deviant Eyes Deviant Bodies (1996), she is also concerned with representations of non-dominant sexualities and pleasures which can be read as exceeding the norm, as well as with bodies which cross boundaries of gender through performance or physiology. These representations of bodies are excessive and they blur the boundaries upon which identity is founded.

The physical and the performative aspects of excess and blur meet decisively in the category the freak, a figure who makes an appearance in the final chapter of Deviant Eyes (261). Susan Stewart in her book, On Longing, says that the physiological freak

[19] Also interested in the excess of performative gender are David Bell, Shannon Bell, and of course, Judith Butler.

[20] If a woman needs to remove a beard to perform femininity how essential is her feminine gender?

represents problems of the boundaries between the self and other (Siamese twins) between male and female (Hermaphrodite), animal and human (wild men) (Russo 79). Even a cursory glance at collections of images of, or critical articles on, freaks make it apparent that some bodies are included in these discourses because of innate physical difference while others, with "normal" bodies, are there because of the way in which they perform difference.

Like scientifically based projects to define difference, freak shows grouped together the physically disabled and the exotic ethnic other (Thompson 5). The line between display for entertainment purposes and display for medical reasons during the nineteenth century was not clear. Often the images were taken in the same studios with the main difference being that in the souvenir cards the subjects wore clothes while in medical images they were more often naked (Thompson 27, 159). Furthermore, from the standpoint of the present, many of the images which were originally created for other purposes have now become part of collections concerned with the history of medicine (Worden).

Rosemary Garland Thompson, a scholar who addresses the category of the freak from the rubric of disability studies, elaborates on the diversity of "freak discourses." The scientific discourses that now pathologize the extraordinary body, such as genetics, embryology, anatomy, teratology and reconstructive surgery, as well as anthropology, ethnology, museum culture, and taxidermy were once closely linked with the showman's display of the freak body (13). To these Russo adds medicine, criminology, tourism, advertising, entertainment and eugenics. More than possibly any other category of bodily representation, images of the freak body show how diverse discourses of the body interpenetrate and condition how that body appears in culture. It is the overlapping of

diverse discourses, something which is characteristic of all categories of corporeal imagery[21] that I wish to highlight here, rather than the transgressive potential of freak status. Russo, with customary caution, suggests that we need to be careful about nostalgia and idealization when writing about freaks (84). Despite the transgressive potential of the extraordinary body, the extent to which the freak body as a category has been subject to the exercise of power through these various discourses must not be under-estimated.

As noted, images of these bodies were read both through the discourses of the sciences and through the discourse of the freakish, the grotesque and the obscene. Michael Mitchell's Monsters of the Gilded Age: The Photographs of Charles Eisenmann, published in 1979, provides enlarged reproductions of images of nineteenth century men and women who worked as freaks next to texts which interpret the images in terms of ethnography (Aborigines, Zulus), pathology and ethnography (Bartola and Maximo) or medical pathology. Thus those who blur the boundary between human and animal are no longer wild men, turtle boys, dog-faced boys, or leopard boys. They are now mentally defective midgets, congenital syphilitics, sufferers of congenital hypertrichosis lanuginosa and partial adontia, or autosomal localized depigmentation (Mitchell). Or, as Thompson puts it, "in modernity the prodigious monster is transformed into the pathological teratra" as "wonder becomes error" (3).

The discourse which is in operation in representations of the freak body, which Garland neglects to include in her list, is the pornographic. The drive towards maximum visibility which Linda Williams makes central to her understanding of pornographic

[21] Other connections can be drawn between these categories of bodily representation. The orientalist fantasies behind high art depictions of the ethnographic other (the nudes of the "harem") clearly relate to the display of exotic others at world fairs and side shows. A sideshow standard in which the ethnographic and the pornographic overlapped was the hootchy kootchy dance (basically a striptease) which was apparently originally inspired by a Syrian belly dancer, Fahreda Mahzar (Vaughn 221). See also Kelly Dennis "Ethnopornography: Veiling the Dark Continent" and Todd D. Smith "Gay Male Pornography and the East: Re-Orienting the East."

representations of the body is at work in images of the freak body. This is most explicit in the case of hermaphrodites, but figures also in the representations of conjoined twins. Williams states that it is important to recognize how science and prurience interpenetrate and how "[s]cience and spectacle impel each other according to the principle of maximum visibility" (53). The supposition that the speculum and camera both probe for hidden secrets of the female body or female pleasure is borne out in the following images.

In Monsters Mitchell reproduces two images of Millie and Christine, African American twins. In the first they are pictured partially disrobed to show where their bodies joined. The second image is a photograph made of an engraving from a (medical?) book (this is the only occasion that such an image appears) showing that the twins were united in such a way that they shared genitals. The text that is visible around the image includes such details as their separate pulse rates, but also includes what appears to be the author's explanation of how he arranged this spectacle. That this image was made in the first place is evidence of the overlapping discourses of medicine and freakishness. That it is included in this late twentieth century century coffee table book points to the author's (and the reader's) desire to see.[22]

Conclusion

Clearly, of all the kinds of corporeal representation considered above, it is Sekula's concept of the evidentiary portrait, as exemplified by the images in Garland's study which most directly speaks to the project of examining what and how the clinical

[22] One also cannot help but wonder if the twins' social position as female, African American (born into slavery) had something to do with their being pictured in a way which is so different from the other individuals in this series of photographs. Off-hand I am unaware of other images of conjoined twins which resemble these. The only image of Cheng and Eng in which they are not fully dressed which I can think of is posthumous and Daisy and Violet Hilton in the 1920s are typically pictured as "new women."

photograph means. Garland's statement that, "[t]he extraordinary body is fundamental to the narratives by which we make sense of ourselves and the world" (1) has strong resonance for my own project. However, as we have seen in this chapter, no genre for representing the body exists in isolation. The honorific is defined against the evidentiary, the nude against the naked, and the obscene against the contained and classical. Understanding the discourses surrounding, for example, the honorific portrait, and examining how images can slip from this category to that of the evidentiary image, gives us some idea of how evidentiary images of all kinds (including clinical photographs) are constructed. This examination of how transformation is courted, power exercised, and pleasures defined through representation underlines the political dimensions of the study of clinical photography.

We have also seen how the dual desires for truth and transformation lie at the heart of representations of the body. Whether this transformation exists on an individual and mystic level in the form of artistic inspiration, or at the societal level where established norms are overturned, it often co-exists with a contradictory desire for unmediated, transparent representation. This contradiction also characterizes the production of clinical images—which purport to provide transparent, truthful representations, while simultaneously transforming excessive or unruly bodies into objects of knowledge. While previous chapters have addressed the desire for, and critiqued the possibility of, unmediated, objective representation, this chapter addresses how images are defined through particular discourses to tell particular kinds of stories about the self and the other.

The final major question of this chapter is where, in these stories of truth and transformation, is there space for resisting the definitions that these imaging practices

sanction. Excluding idealistic utopian prognostications such as those in Be-ing, the representations of the body which are deemed most likely to function as points of resistance are those in which boundaries are blurred and genders, sexualities and viewing positions are unfixed. Although, even in these cases, given the history of repression which has often accompanied the visual definition of difference, the authors are cautious not to overstate the potential of such images.

The best example of clinical images of the body which can be read simultaneously in terms of repression and resistance are some documents of gay and lesbian identity made or collected by sexologists (such as Magnus Hirschfeld). I believe this has to do with the conditions under which the images were produced, as well as the fact that many of these images have been reappropriated to form part of this self-identified group's history. One example of this is Jennifer Terry's documentation of a group self-identified lesbians who agreed to participate in a study of their physiology in the 1930s in order to advance scientific knowledge and, as a political move, to solidify (and possibly even normalize) their identity category in the discourses of mainstream culture. Their motivations to be represented through the discourses of the scientific establishment are not that different from those attributed to women and men who contributed images or allowed their sexual performances to be recorded for the Kinsey Archive (Terry, "Seductive Power" 275-6). Voluntary participation and the recuperation of these images as documenting a group's history are very different circumstances than often accompany the production of evidentiary portraits and their subsequent position as historical documents. Many were the result of compulsion or coercion and many are still painful documents of once-powerful racist or sexist theories of difference.

Generally speaking, it really is difficult to read any possibility of resistance into

most images of the body of the other which often seem to have more to do with subjection than subjectivity. In all of the modes of corporeal representation, particularly of members of non-dominant groups, there exists the demonstrated potential for the production of images that are objectifying, othering, and oppressive. This is something I think is particularly true of images made under the discourses of science which have additional access to the truth. When looking at historical images of Millie and Christine as scientific subjects, I see images of women subjected first to clinical representational practices and then to the rediscovery of these images as exotic, rare, and collectable, through their publication in a coffee table book. Other images are ambiguous, such as photographs of hysterics from the Saltpêtrière, in that it is possible to imagine that despite their incarceration in the asylum, some of Charcot's "stars" might have taken some pleasure in the attention and interest that their performance of his version of hysteria occasioned.[23] Finally, sometimes, in looking at images in medical journals, I think I see a flicker of resistance in clinical images in which patients, despite illness, are clearly making an effort to "look their best"—refusing to submit entirely to the objectifying process.

Essentially, from the standpoint of contemporary scholars and artists, the final goal of this chapter is not so much the reading of resistance into repressive historical images as Allen Trachtenberg and others try to do. Rather it is an understanding of what assumptions lie behind different modes of representing the body and what were the component parts of the discourses that made these representations so compelling and convincing in the stories they told about normalcy and difference.

In the next chapter I will move from the examination of the discursive field which

[23] These performances were elicited through what Foucault refers to as "enormous apparatus for observation, with its examinations, interrogations, experiments" which functioned as a kind of "machine for incitement" (in Williams 47).

provided the conditions under which clinical images were produced and understood, to looking at early photographs which have continued to exist up into the present day. The basic question to be addressed is, what roles do these images play in scholarship when they have outlived their original clinical functions? Particular attention will be paid to what they have to contribute as sources for historical study, and the difficulties they pose as historical documents.

Chapter Four: The Afterlife of the Clinical Photograph: Early Clinical Images as Source Documents (1849-1920)

This chapter is concerned with the earliest efforts of doctors and scientists to photographically document the human body and the methodological challenges contemporary scholars face in working with such images as source material. Following a brief overview of the appearance, reproduction and circulation of the clinical image, the central question of what functions these images serve in various branches of contemporary scholarship will be considered. This chapter and the subsequent one address two kinds of attention which is directed towards the early clinical photograph: scholarly and aesthetic. This chapter is concerned with the potential of these images as sources for historical study, and the next with the relationships between the clinical image and the collector or connoisseur. Each chapter addresses the uses to which clinical photographs are put in contemporary culture through an examination of the work of medical historians, collectors and others. As will be seen, because there is no agreed upon method of incorporating photography as source material, these individual cases can just as easily prove to be cautionary tales as exemplary models.

The moment when clinical photography was established as a specific practice varies greatly depending on whom one asks. Some have identified it as the achievement of a particular individual. In the mid-twentieth century, historians of medicine and art (George Rosen and Allison Gernsheim) pointed to a German orthopedist[1] photographing in 1852 (Burns 1258), while Julie Nakamura, author of Your Future in Medical

[1] There is some disagreement as to his identity. He is variously identified "Fredrich Jacob Bernadette" and "Hymen Wolff Burned."

Illustration, suggested that a Dr. Thomas R. French of Brooklyn produced the first clinical images in 1862 (50).[2] More recently, the practice is described as having diffuse origins, with images being made independently in diverse locations as soon as the technology could be adapted to the purpose. Stanley Burns, for example, the preeminent collector of clinical photographs in North America (Peres, Teplica and Burns 13), states that clinical photographs and occupational portraits appear almost immediately after the introduction of the daguerreotype in 1839, with examples in his collection dating from the 1840s (Burns 1256).[3]

The discrepancy in opinion probably arises not only from the regular discovery of earlier examples by collectors, but also from differences in how clinical photography is defined, as the practice of medical photography[4] has changed over the one hundred and fifty years or so of its history. As noted in chapter two, the formal differences between early images and other portraits were slight, as they were made in the same photographic studios (figure 10). Those authors who assign a later date to the birth of the clinical photograph are likely using the standards that would apply to modern images to pinpoint early examples of the practice.[5]

Although failing to identify a first practitioner, and thus forgoing the pleasure of finding a single founding father, Burns's approach probably makes more sense. If we

[2] I would like to note that while Nakamura's text is comprehensive, there are a few significant inaccuracies. Locating Charcot's photographic department in Vienna rather than Paris (50), and stating that there was only one medical photographic journal in existence until the 1960s (148) would be two examples.

[3] This collection is worth special mention as it is the source for a number of publications in the area of medicine and photography, some of which will be the focus of the following chapter. Stanley Burns is an opthamologist practicing in New York who has amassed a remarkable collection of photographs relating to medicine and dentistry. He has collaborated with a significant number of authors on a variety of texts—some more critical than others. His own major monograph, Early Medical Photography in America (originally published as series of articles in the New York State Journal of Medicine) contains six essays which deal with technical and social aspects of diverse items in the collection.

[4] I am choosing to use the terms "medical photography" and "clinical photography" as being basically equivalent. This is not always the case. In historical studies such as Fox and Lawrence's Photographing Medicine the "medical photograph" is defined as consisting of images such as professional portraits, publicity stills, and ward photos with few clinical images being in evidence.

[5] Chapter six will address the rise of the modern clinical image to which George Rosen is most likely referring.

consider the simultaneous appearance of two independent photographic technologies, from Talbot and Daguerre, and the immediate and world-wide popularity of portraiture, it seems unlikely that the decision to record visible medical conditions would have been a unique development. The only question that remains, however, is that of intentionality. While early images clearly depict lesions, tumors and various skin conditions, many do not differ from portraits of apparently healthy people in any other way. How do we know that these were produced as clinical images, and not merely as honorific portraits of individuals who lived with these conditions because effective or safe treatment was unavailable in the nineteenth century? However, beyond merely collecting such images, Burns has documented their function as evidence. Images from the collection are variously identified as having been used for patient records, teaching, consultation and research purposes. Keeping all this in mind, it is hard to discount such early images as clinical photographs, despite any Victorian untidiness, as one author called it, which might be cluttering the backgrounds (Marshall 14).

The moment when these early images, often cluttered, amateurish, or unclear, give way to the distinctive aesthetic conventions of the professional modern clinical photograph, is, likewise, a matter of some contention.[6] "Roughly speaking, however, it is not until the 1890s that photographers began using a set of distinctive conventions for clinical images (Fox and Lawrence 9) and they were not consistently applied until at least the Second World War. In his own collection Burns identifies 1920 as the end date for the production of early images. The process of the professionalization of clinical photography which led to the development of the characteristic aesthetic of modern images will be discussed fully in chapter six.

[6] In fact, as recently as 1995, some authors have speculated that the majority of clinical photographs are still taken by physicians and allied health professionals rather than professional photographers (Peres, Teplica and Burns 5).

Throughout the nineteenth century, however, there were few professional clinical photographers. Clinical photography was the product of professional photographers, contracted by physicians to document cases, or the physicians themselves, who often practiced photography as a hobby. As a result, it is difficult to say with any precision how frequent the practice was and how many images were made. It is only recently with the publication of images from private collections such as Burns's that the full extent of early practice has become evident. What is certain, however, is that many of these images have not survived into the present day.[7] The clinical photographs which still exist from the first hundred years of the practice are often those which circulated outside the patient's file at the time of their making. These include images which were published in journals such as The Lancet and the Journal of the American Medical Association and textbooks. Other extent images are those which found their way into archives or private collections, some of which have been reproduced in a few scholarly or specialized books and articles. This means that, while the bulk of images may well have been lost or destroyed, a number of these images are still circulating in contemporary culture. It is these images with which this chapter is concerned.

While it is not my intention to trace the technical advances in photography and in the means of reproducing images for publication as frequently outlined in histories of the medium,[8] I would like to briefly address what images typically looked like, and what assumptions were made about the medium—primarily the early and persistent assumption of the evidentiary force of the photograph—before returning to a discussion of contemporary uses of the images.

[7] This is something that is asserted by various authors about photographs in general because of their delicate nature and because, at least compared to other modes of image making, they are relatively cheap and plentiful.

[8] See Gail Buckland's Reality Recorded: Early Documentary Photography, Roy Flukinger's The Formative Decades, Martha Sandeweiss's Photography in Nineteenth Century America or Richard Rudisill's Mirror Image: The Influence of the Daguerreotype on American Society.

All early photographic technologies were used to make images of the body for science and medicine. The earliest technologies such as daguerreotypes, calotypes, and wet plate processes were used, despite limitations such as irreproducibility, lack of clarity, and long exposure time that were inherent in them. Newer technologies such as dry plate processes and celluloid film, which resulted in technical advantages such as faster exposure times, greater portability, and greater ease of operation, were adopted as they appeared.

The images produced differed from drawn or painted clinical images in terms of the speed, detail and reputation for unerring truthfulness. They also differed in the fact that, except for daguerreotypes and ambrotypes, which produced unique negative images, they were all infinitely reproducible. As Walter Benjamin famously addresses in "The Work of Art in the Age of Mechanical Reproduction" the possibility of endless reproduction changes the viewer's relationship to the image. This replication of images made possible by negative/positive processes, was further amplified by printing technologies which further encouraged the distribution of images through publication.

Working backwards, the history of reproducing images for publication looks like this. The halftone process, which is still used, dates from the 1880s and became relatively inexpensive in the 1920s. It is frequently remarked in studies of documentary photography that picture-based publications such as Look and Life magazines only came into being because of technological advances which reduced costs. Before this, images for publication were produced using photogravure (1880-1910), collotype (1860s-1890s), and woodburytype (1870-1900) which were all much more expensive processes, limiting the number of images published.

In the first two decades of photography though, before the appearance of the first

of these permanent printing processes, the only way to reproduce a photograph was to use existing printing and engraving techniques. If one wanted to incorporate an image there were only two possibilities. One was to include the actual photograph itself, the other was to commission an artist to produce a hand-drawn woodcut or engraving based on the photograph (Trachtenberg, Reading 26; O'Connor).

For example, the most famous photographs of the civil war, which were noted at the time for bringing the war home, circulated widely in Harpers Bazaar as woodcuts/engravings. They were available to the public in their original form at Mathew Brady's studio, and later in a luxury, limited edition text with hand tipped-in photographs rather than woodcuts/engravings, Gardner's Photographic Sketch Book of the Civil War (1866), but most people saw these images in their transcribed form. This means that the images of the dead which were said to be so devastating because of their realism, were seen by many only as hand-drawn reproductions.

In the field of medicine, images based on early clinical photos accompany articles in the early years of the Journal of the American Medical Association. In this case, in the articles which these images accompany, the authors ask the reader to examine the accompanying photograph, making no reference to the transcription the image had undergone. In some ways this is not remarkable as no one would be expecting the actual photograph to be affixed to the journal, however, the effect of this failure to distinguish between the photograph and the artist's interpretation is to invest the drawing with some of the qualities normally associated with the photograph such as truthfulness and evidence. Although people did understand the difference between the photographic image and an artist's transcription of that image, I would argue that the clinical images and the images from the war retained their status as evidence because they were understood as

being tied to the photograph they represented. That these reproductions were also interpretations is shown in comparisons of such images and the photographs on which they were based, such as those of H. W. Diamond, available in Sander Gilman's Seeing the Insane and Georges Didi-Huberman's Invention of Hysteria (figure 2).

To return to the historical clinical photographs which are presently in circulation, something they have in common is the fact that they have largely ceased to serve their original functions and authors' intentions. While some still have clinical significance (for example, images which depict diseases that are now eradicated such as smallpox) their meanings have been reiterated through other, non-medical, cultural institutions. In the case of clinical photography, with time, new connections to discourses of scholarship, rarity, connoisseurship and aesthetics have come into play. In fact, these new iterations of the images' functions have been responsible in some part for their preservation and continued presence in the culture.

As has been addressed in chapter two, theorists of photography such as John Tagg postulate that the circumstances of a photograph's production condition its ideological existence. However, Tagg does not suggest that it is only the conditions of production which shape how and what an image means. Because of changing audiences, uses and means of circulation, the meaning of a given image is not stable over time. Photographs essentially have a kind of after-life and, through articulations to new institutions and practices, a body of images may take on new meanings.

One would imagine that, if any field were to make extensive use of such material, it would be the history of medicine, in that clinical images are a direct artifact of historical medical practice. One finds, however, that studies which address the clinical image are quite rare and really only a subset of larger projects dealing with the use of photographs

in the history of medicine as a whole, which, itself, is not a large field. Because relatively little has been done in this area, historians of medicine who become interested in the photographic record must contend with a wide variety of subjects including: photojournalistic images, professional and informal portraits of doctors, images of nurses, photomicroscopy, x-rays, surgery, documentation of public health projects, educational images, pictures of sanatoria and hospitals, including wards, chapels, grounds, staff, and outpatient clinics in addition to clinical images. A phrase which medical historians Daniel Fox and Chris Lawrence sometimes use to indicate this broader field is "pictures about medicine" (3). Clearly there are difficulties inherent in addressing source materials which have their form (photography) and a general topic (medicine) in common, but have differing subjects, use different aesthetic conventions and were put to different uses.

The most significant underlying problem, however, which historians have had in incorporating photographs as source material is one of methodology. This is true whether they are only concerned with clinical images or with the more broadly defined pictures about medicine. Their discipline has engaged in what a major figure in the field, Charles Rosenberg, refers to as "an habitual privileging of the written word" with the effect that "[a]rtifacts and images remain marginal to the work of most professional historians" (Golden and Rosenberg xxv). This has had two results. The first being that images and their study have been marginalized. Just as the visual arts were considered merely a reflection of the political world in pre-Althusserian Marxist theory, the image has also been considered "as a supplement; the ruffles and flourishes that will enhance [...] finished research" (Davidson 115). There has been a general understanding of visual materials as decorative (Peters and Mergen 280) and generously illustrated texts are often greeted with the dismissive appellation of "coffee table book" (Fox and Lawrence 6;

Duffin 867). Though this can be an accurate description, its blanket application is frustrating for historians who, having recognized visual material as a valuable alternative source of information, are conscientiously working to incorporate the study of it into their practice. The second result of the privileging of the text is that historians, for the most part, are not trained to analyze visual sources (Fox and Terry 435). Although they might ideally wish to "employ the same aggressiveness used in examining written evidence" (Davidson 116) in the study of images, the tools have not been close at hand.

The pattern of the marginalization of images and lack of training in their use as source materials might be more than a side effect of the privileging of the written word in a particular discipline. It may come from widely held attitudes about visual sources addressed in chapter two—that they are obvious and do not need the same "aggressive" treatment as text. Images are often assumed to be eminently and easily readable without significant specialist interpretation. The metonymical function of photography, the elision between the object and its representation,[9] seems so natural that it is difficult to see the photograph as anything other than "a re-presentation of nature itself [...] an unmediated copy of the real world" (Sekula, Photography 5). More simply, as Fox and Lawrence suggest, "everyone has taken for granted that photos freeze a moment of reality" (7) with the result that photos have been "considered too obvious to merit the historians' close attention" (6) and have been relegated to an illustrative role.

To complicate things, I would like to note that the historians were not alone in this judgment. The status of the photograph as an art object was somewhat shaky for at least the first dozen decades the technology existed and even those arguing for the

[9] As in when someone shows one a picture in their wallet and states, "This is my little girl."

recognition of only certain kinds of practice at the expense of others. Even if one was to consider art history the proper domain of photographic scholarship, the majority of images were disqualified due to their documentary, journalistic, commercial or amateur nature, or the intentions or status of the photographer (Trachtenberg Reading, 173). If a historian chose to cross disciplinary boundaries in an attempt to solve the difficulties inherent in dealing with visual archival materials, he or she would find that the tools of the art historian were calibrated for high art, primarily oil painting, and not photography.[10]

Furthermore, because of these two factors there are very few examples or models to which historians interested in using photographic material can turn. Specifically within the field of history, one of the most well known texts which incorporates photographs is generally considered suspect in terms of methodology. Michael Lesy's Wisconsin Death Trip (1973) is notorious for playing fast and loose with images and narrative and generally eschewing the historical method. Lesy presents reproductions of archival photographs, including, most famously, posthumous portraits of children and adults, which he has arranged, collaged and occasionally distorted (reversed or inverted) for the purposes of creating a kind of narrative. When measured by standards other than those of the discipline of history, the narrative and aesthetic elements of the project merit praise and even other historians refer to him as "the best known name in the field of photographic study" (Peters and Mergen 289). However, he does little to convince serious historians of the value of the photographic image as a primary source. Although Lesy himself acknowledges that "[i]t is very difficult to use photographs historically because it

[10] As recently as 1988 John Tagg, in The Burden of Representation writes that he originally presented his materialist account of photography outside the spaces of art history, and that he hopes that it has finally become acceptable to combine cultural theory and art history.

seems so easy" (Levine 382), his methodology as generally been castigated as insufficiently rigorous. One reviewer described his Wisconsin Death Trip as relying "on airy, intuitive images rooted in what seems to be amateur psychoanalysis" (Levine 383).[11]

In a similar vein, here are also the coffee table books, which couple images with a skeletal kind of text, and leaving them to "speak for themselves" in a "universal language" (Sekula, Against the Grain, 81) perhaps assuming that each photograph really is worth a thousand words—an approach which tends to present photographs as if they were windows to the past, not taking into account the possibility that the interpretation of the visual world is culturally and temporally specific.

It is interesting to note that the problems facing historians interested in using photographs as sources are not significantly different than those faced by theorists of photography, including the existence of predecessors whose work undermines the reputation of the field as one worthy of serious study. In both cases scholars must deal with assumptions that images are merely illustrative and secondary to the written word, and that they are almost too obvious to require serious attention, while simultaneously being slippery or untrustworthy at the level of meaning. The possibility of shifting photographic meaning (which troubled theorists such as Sontag), is one of the reasons why the use of photographs as documents has been problematic for historians, but there are also echoes of RolandBarthes's evocation of the photograph as an almost magical means of touching a fugitive past. Historian of medicine Jaclyn Duffin in reviewing some texts proposing the use of photography in

[11] Lesy's contribution (especially now with the recent release of Death Trip as an underground feature film) seems to have been a demonstration of the powerful fascination images of people from other times and places can hold for the contemporary viewer. His notoriety is due at least as much to subject matter as to unorthodox methodology. The most striking aspect of Lesy's text for most people is the reproduction of photographs of the dead. In any context these once common, posthumous portraits of adults and children from the nineteenth century would be fascinating and touching.

historical study goes so far as to suggest that "the difficulty may not be the fault of the historical method, so much as the intimidating power of the photographic image, which seems to present absolute truth" (868).

Despite this "intimidating power" and other conflicting claims concerning the nature of the project, historians of medicine, like theorists and historians of photography, also feel there is much to be gained from attempts to work in this field. Photographs have proved attractive as what historian Rima Apple calls "complex primary source documents" for a number of reasons. At the most basic level photographs can provide physical details and may show aspects of "relationships among people and between people and institutions not discussed explicitly in other types of sources" (Apple, "Image" 40). This makes them particularly useful for historians like Apple who are interested in the history of nursing or women's history in general, as "[m]any aspects of these histories never appear in traditional source materials" (Apple, "Image" 40). There are also occasions when information from different kinds of sources collides and photographs can "enable historians to do more than tell a familiar story using a different kind of document" with resulting new understandings of the past (Fox and Lawrence 6).

All of the major works in this field are ambitious in scope and in purpose. This is even the case when researchers have attempted to limit the field of study. Charles Rosenberg and Janet Golden are commended by one reviewer for having limited their study Pictures of Health to representations of health care in Philadelphia. The study, however, still covers images dating from 1860 to 1945 of medical schooling and training, surgery, clinics, dispensaries, nursing, hospital buildings, maternity and children's wards, private rooms, mental hospitals, radiology, physical

therapy, pathology laboratories, sanitation, pest control, visiting nurses and industrial health and hygiene—to provide an incomplete list. A similar "limited" study which still covers a great deal of material is John Stoeckle and George Abbott White's Plain Pictures of Plain Doctoring which concerns what they call "vernacular" images made by government-hired photographers working for the Farm Security Administration in the United States between 1935 and 1942.

Of course, it is not only the range of images that makes these studies ambitious; Apple, Fox, Lawrence, Terry, Stoeckle, White and others all attempt to establish a methodology to help them deal with the difficulties inherent in using photographic sources, while putting their theories into practice in "hands-on" study. The emphasis on methodology is important because, as Fox and Terry put it, "[s]ources worth using are worth using carefully" (457). Furthermore, it seems more productive to attempt to incorporate visual sources into the study of history than to throw up one's hands and ignore this material because of assumptions in the culture about its intimidating inherent truthfulness.

The methodologies proposed by various scholars differ, but do share in common the attempt to fulfill the dual tasks of answering theoretical concerns while providing a grounded "how to" approach for other researchers. Sensitive to criticism which might result from their engagement in this relatively unorthodox area of study, most historians are careful to explicitly acknowledge the continued importance (or primacy) of written sources (Fox and Lawrence 5; Fox and Terry 452; Apple, "Images" 42; Davidson and Lytle 218). Photographs, we are told, like other non-verbal sources, cannot replace written sources. They can only complement them because photos rely on written sources (Fox and Terry 435). Among the articles and

books considered here, Fox and Terry outline their methods in the most concrete fashion, though they state that their exploration is tentative (457).

They propose four steps for the study of photographs. Initially they suggest that one treat the photo temporarily as a self-sufficient "text"—looking for unusual details and asking questions like, "What is the subject? Is it rare? What is included or excluded? Where is the photographer? Has it been cropped or retouched?" They then suggest that one take advantage of whatever facts are available (if any) about the actors in the production and use of the image. Do we know anything about the photographer, the intended audience, the collector or why the image was saved (Fox and Terry 446)? Then, acknowledging the importance of written sources, they propose a search for contextual information in the applicable fields—in their case suggesting medical, photographic and social history. Finally they ask a question that may become easier to answer as the project progresses, "Where does the image belong in relation to other images?" Is it composed or candid, an attempt at art or is its purpose technical/scientific? (447).[12]

The procedures suggested by Fox and Terry, dating from 1978, are decidedly not the last word on the use of archival photographic images. Daniel Fox returned to the problem, refining some elements, in his later work with Christopher Lawrence. Much of this second work is devoted to attempts to identify and compare photographic conventions in different genres of medical images in Europe and America. Fox and Lawrence see the changing conventions in images, and the different messages they convey, as reflecting changes in contemporary understandings of aspects of medicine and "in the self-perception of those involved in producing the

[12] The power of the archive to render an object worthy of study and artifactual affects the way that the objects which it is composed of are read. Sekula writes that "to regard an object as an artifact is to reinvent it, to superimpose a new meaning on the past, and therefore to mutate all earlier senses of the object" (Photography 33).

photos" (9). Thus they report that, initially, in portraits, doctors (with photographers) tended to define themselves by the same conventions as educated classes, while nurses were often depicted as workers, with their uniform serving as the defining element (46). They also identify some conventions which changed completely over a period of time—suggesting, for example, that changes in photographs of surgery around the turn of the century might reflect its changing status in the culture.

In a review of Photographing Medicine and Images of Nurses (which includes Apple's photographic essay "Image or Reality?") feminist scholar of science and medicine Ludmilla Jordanova voices some criticisms which might aid in the development of new methods of dealing with photographs. Challenging Fox and Lawrence's use of the term "message" to describe the information which can be read from an image she states that, in light of the multiple readings available to viewers, such an approach "seriously underplays the ambiguity of images and overstates their capacity to tell stories" (95).[13] She also feels that their use of the idea of convention is dangerously circular if they are inferred from the pictures alone and then reapplied, suggesting a more precise (though difficult) approach which would "lay bare the precise mechanisms whereby pictures are made, sold, displayed and responded to" (96) echoing Tagg's call for a materialist account of photography. The one proposal which Jordanova makes which has not yet made an appearance among the texts considered is one which involves additional crossing of disciplinary boundaries. Warning that there are dangers in treating any medium in isolation (as art historians

[13] For an example of historians who perhaps overstate the potential of the photograph to carry a message see Robert Levine review of Peter Bacon Hales's Silver Cities: The Photography of American Urbanization, 1839-1915. In this, the "quietly manipulative" photographers of the nineteenth century "directly and knowingly shaped the ways in which the public mind reacted to change" (380).

have been prone to do) she endorses the idea of doing comparative work which addresses the similarities and differences in representations of the same subjects in painting and photography (99).

Despite any criticisms, she does concede that, as the field stands right now, the task of untangling the basic conceptual issues is an enormous one (99), adding that those who venture into it should be "warmly applauded." She refers to these historians of medicine and photography as pioneers who should be remembered with gratitude by future scholars who struggle to further develop better and more specific means of approaching visual material. The new field she recognizes as benefitting particularly from the work is that of visual culture. Barbara Maria Stafford's Good Looking: Essays on the Virtue of Images and Lisa Cartwright's Screening the Body: Tracing Medicine's Visual Culture would be two examples. Both texts are informed by feminist theory and neither are strictly bound to a single discipline. Also looking to future scholarship, both the editors of the Illustrated Catalogue of the Slide Archive of Historical Medical Photographs at Stony Brook and Fox and Lawrence write explicitly of their hopes for interdisciplinary collaboration and of their intention to reach two audiences who might participate in such a venture: "historians of medicine who do not usually use photographs and scholars of the history of art and photography who might be convinced to become interested in medical photography" (329). A recent development, in which Stony Brook is a participant, is the availability of these materials on the internet in sites such as the Eugenics Web. By centralizing the holdings of a number of archives and making them available virtually, the likelihood of such material attracting the interest of scholars is greatly increased.

The next part of this chapter is devoted to the examination of the modest

number of recent projects concerning the clinical or scientific imaging of the body by non-historians. The approaches taken by specialists in literature, sociology, social history, cinema, and art history will be considered.

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Having addressed the efforts inside the discipline of medical history to make use of photographs as source material, it is probably productive to look outside the discipline, as suggested above. Outside of the field of medical history there are a few scholars who are known for using archival photographs of the body as primary source material and reproducing them so that they circulate more widely. Although none of them are medical historians, all deal with images of health, illness or death. I will first address the different approaches to the use of photographic source material taken by three authors: Sander Gilman, Jay Ruby and Alan Trachtenberg. Following this review of possible methodological models, I will turn to the work of other authors who are using archival images of the body to examine the history of the construction of racial, gender, class or other difference.

Certainly the most prolific author dealing with photographs of health, illness and normalcy is Sander Gilman, whom Jaclyn Duffin describes as "[b]reaking the silence around medical photography" (868). The past president of the Modern Language Association, Gilman has produced many texts which deal directly and indirectly with clinical images. Venturing into the field in 1982 with Seeing the Insane, Gilman's work has not been limited to medical photography. In his various books and articles he has addressed the role of imagery in the definition of mental illness, disease, beauty, AIDS, Jewish identity and race. It is his contention that the repetition of visual stereotypes contributes to the naturalization of the position of the other in a

given culture. Because of Gilman's prodigious output, an analysis of his methodology is somewhat complicated. Some of his texts rely heavily on visual sources, and others not at all. For the purposes of this study of the use of visual materials as a scholarly source, the former will receive particular attention.

For scholars in photographic theory and history there are strengths and weaknesses in Gilman's methodology. His work is accessible, attractive and because of the unusual, and sometimes controversial, subject matter, fascinating. The unifying feature of Gilman's research is his concern with identifying influential patterns of literary and visual representation that have persisted over time. Although some of his articles are limited to a specific historic moment, many attempt to demonstrate a pattern over hundreds of years. A seductive approach, these demonstrations make a strong argument for the powerful ideological functions of images. As we have seen in chapter two, the establishment of a theoretical foundation to provide a justification for the role of the visual in the formation of ideology was and is a struggle for politically engaged artists and theorists of photography. While it would be incorrect to characterize Gilman as politically disengaged, with his obvious concern for how non-dominant groups have been constructed, textually and visually, as irredeemably other, he does not frame his arguments in terms of politics. Instead he lets the images speak for themselves. This approach, while not precisely that of the authors of coffee table books bemoaned by Fox and Lawrence, does treat the images as obvious and transparent.

This is not to say, however, that Gilman makes no effort to contextualize the images. The images he chooses to reproduce demonstrate tendencies which he has first identified in text based sources. His close reliance on texts which originally

accompanied the images he reproduces, or come from the same period or tradition, is functional in that it addresses the historian's and the theorist's concerns about the fugitive nature of photographic meaning. Here the photograph's meaning is tethered to text, which is the author's primary area of expertise. However, this reliance on text also has its drawbacks, one being that the image is of secondary importance in this model. To a certain extent, Gilman's use of images can be considered merely illustrative of what he has found in his textual sources. While this certainly enriches a text based argument, it also reinforces some of the ideas about the too obvious nature of images outlined above. It could be argued that there is nothing in his methodology which is specific to dealing with the visual.

One particularly troubling aspect of Gilman's work, as far as its potential to provide a model for the use of visual source material is concerned, is his tendency to treat all kinds of representation as equivalent. He does this across time and across genre, assuming a kind of transparency of representational practice—that is, that representations mean the same thing in the same way at different times and places. In Seeing the Insane (1982) and Sexuality: An Illustrated History (1989), images from high art, science, advertising and popular culture from different historical periods crowd up against each other. One advantage of this, as noted above, is that the incorporation of images from disparate representational practices makes a powerful argument for the ubiquity and ideological impact of the tendency under consideration. Additionally, the inclusion of images produced from both inside and outside the domain of science, demonstrates how popular and academic discourses about difference interpenetrate. Again, however, this happens at the cost of a desirable specificity. Furthermore, for theorists or historians of photography the most

problematic aspect of this equivalence is that the special character of photographic representation is largely neglected. Not only do the images come from different genres, they are in every possible medium from oil painting, to woodcuts, drawings, engravings, and cartoons as well as photographs.

There is no doubt that, in his large body of work, Gilman has demonstrated how powerful arguments for the constructed nature of difference may be made by tracing patterns of representation over long periods of time, through various discipline and in every visual media. However, in terms of providing a model for the use of visual material in historical study, there are a number of problems in his approach. The first is the absence of a specific methodology for dealing with visual sources. The historians of medicine addressed above all identified this as the primary difficulty in incorporating visual source material into their research. None of them denied the interest inherent in images, but many found that methodological difficulties impeded their ability to use photography in a manner consistent with the historical method. Similarly, the absence of a focussed attempt to deal with the special status of the photograph makes this material less useful than it might otherwise be to theorists and historians of photography. Gilman, coming from a background in literary studies, is less constrained by the historical method, attention to periodization, and the specificity of individual visual media. The positive effect of this is that he has been a highly productive scholar whose books have opened up new areas for study, such as medical imagery. The negative result, however, has been that, by the lights of other disciplines, though perhaps inspiring or interesting, Gilman's work has not provided an acceptable model for further work in these fields.

Nowhere near as prolific, but perhaps more cautious in his methodology is Jay

Ruby. He has produced one major text which relies on archival photographs for its source material. Secure the Shadow is a study of nineteenth century funerary and memorial photography. As noted above with reference to the infamous Wisconsin Death Trip, images of the dead hold much the same fascination as do clinical images. Although the motivation for the creation of posthumous photographs is often for memorial rather than clinical reasons, there are a number of similarities between the practices—other than the morbid curiosity of the contemporary onlooker. Like the clinical photograph, posthumous portraits use a fairly rigid visual vocabulary, and have undergone a similar transformation from document to object of connoisseurship, often under the purview of the same collector.

While Lesy's use of postmortem photographs in Wisconsin Death Trip lies beyond the pale in terms of historical method, Ruby has taken these images and contextualized them, discussing nineteenth century attitudes to death, mourning, and photography. His careful chronological account traces the tradition from its precursors in painting, to its nineteenth century incarnation as the province of professional photographers, to its continuing but unacknowledged presence in contemporary culture. He explicitly addresses the technologies used, and how they influenced the kinds of images that were produced, noting that one of the main reasons why the practice has disappeared from public awareness is the advent of simple photographic technologies such as the Brownie camera which allowed anyone to produce their own images without the services of a professional. In Secure the Shadow he approaches the photographs as primary sources in a fashion not very different from that proposed by Fox, Terry and Lawrence. This, I believe, along with a more limited field of study, is what distinguishes Ruby's work from Gilman's. For

Ruby, there is no question as to whether the images or the textual sources come first. He begins by discussing the photo as a self-sufficient text, then considers written sources which provide information about the actors in the production and use of the image, and contextual information, finally asking where the image belongs in relation to other images. In doing this he addresses not only what these images meant to their producers and first consumers, but also how those meanings have changed, noting, as Sontag has, that over time, even the most amateurish images tend to attain the status of art. (This last tendency will be further discussed in the next chapter in relation to Burns's collection and publication of postmortem and clinical images.) By turning to other kinds of archival material (diaries, professional journals, print ads, literature) he also answers Jordanova (and indirectly Tagg's) desire for a multidisciplinary materialist account of the images under consideration.

Unlike Gilman and Ruby for whom the subject matter of the images is the central theme of their work, Alan Trachtenberg's main subject is the medium of photography itself and the meanings associated with it. His project exists as a kind of hybrid between Jordanova's which draws attention to the challenges that photographic sources pose and Gilman's which makes extensive use of such images. He provides serious, historically grounded answers to the question of how photography has been understood in the past as well as examples of how individual historical images might be read.

It was in relation to a series of images taken by J. T. Zealy for Louis Agassiz's study of blacks born into slavery in America that Trachtenberg's work first came to my attention. These images, among the very first taken of blacks in America, were produced as evidence of Agassiz's theory of polygenesis which suggested that blacks

and whites were separate species. According to Trachtenberg, "photographs pose a double question of comprehension: How were they understood at the time and how should they be understood today?" (73) and the Agassiz images are no exception. Addressing both these questions, Trachtenberg, however, succumbs to a perhaps understandable desire in the face of such painful, racist documents in his twentieth century reading. He suggests that, while the images were created as what Allen Sekula terms evidentiary portraits in which the subject is objectified, quantified and scrutinized, he sees a kind of inherent dignity in the sitters. Whether or not one agrees with his readings of this series, they underline the distance between contemporary viewers and nineteenth century audiences (figure 6).

It is not in relation to his readings of individual photographs, however, that Trachtenberg's contribution is greatest. Rather, it is in his meticulously researched account of the meanings associated with photography in the nineteenth century. As noted above, many of the difficulties other scholars have encountered in trying to make use of photographs as source documents are related to the paucity of sources that contextualize the medium, that explain how photographs were understood by their authors and audiences. While it has been recognized that the powers and possibilities attributed to photographic technology are temporally specific, few authors have gone further to examine what exact meanings were associated with the medium in its early years. In doing so, Trachtenberg is almost as much a theorist as a historian here, asking the same questions posed by phototheorists, but with a historical emphasis. He states in the introduction to Reading American Photographs that one of his goals is "to submit the myth of the unerring objective camera to the test of historical analysis" (20), stating that photographs "may seem to offer evidence

that objects and people exist, but do they guarantee what such things MEAN? The lesson of the photograph, as early photographers came quickly to learn, was that meanings are not fixed, that values cannot be taken for granted, and that what an image shows depends on how and where and when, and by whom, it is seen" (19).

Though by no means the first to attempt a history of nineteenth century photography, Trachtenberg's attempt differs in its focus on the meanings associated with the medium. Trachtenberg found that other histories proved inadequate as far as this was concerned, tending to rely on the categories of academic art history, organizing the field by photographic process, genre and format (2). While perhaps functional in terms of classifying individual images, Trachtenberg argues that the chief failing of such a history is that it is "assumed to follow a logic of its own, a logic of pictorial development effectively insulated from currents of social, political and cultural history" (20). In order to counter this tendency and to link the history of ideas about photography to their historical context, he turns to a variety of source documents including essays and literary works by Oliver Wendell Holmes, Edgar Allan Poe, Walt Whitman, Herman Melville and Henry David Thoreau (17). That some of his sources actually argue against the idea of photographic objectivity and go so far as to provide concrete examples (18) is of particular to interest to him. He writes that, "[t]he persistence of this popularly held idea [photographic objectivity] in the face of counter evidence makes it especially interesting to historians, for the depth of conviction implies that it answers a cultural need" (18).

Beyond addressing the characteristics of photography in general, Trachtenberg even goes so far as to discuss the distinct meanings attached to particular photographic processes. For example, he notes that in literary representations the

daguerreotype served as an object around which anxieties about sweeping social change could be addressed figuratively, noting that the characteristics of the daguerreotype, including its fine detail, mirror-like surface and fugitive image which flickered from negative to positive, encouraged an understanding of the medium as uncanny (20).

Trachtenberg frames his project explicitly in terms of making a place for the photograph in the field of history saying that, "[a] study of meanings imputed to the medium can help place its history within the broader history of modern culture" (23). While Ruby provided an example of how one might approach a particular practice such as postmortem photography, Trachtenberg's work is a kind of license for any kind of scholarship which might include nineteenth century photographs. In titling his book Reading American Photographs, Trachtenberg is making a statement about the legibility of photographs and their potential as source material. By providing other historians with the necessary contextual material, he is facilitating the use of photographic sources so that, while individual images remain slippery, one may at least hold onto some of the meanings attached to the medium.

None of the recent scholarship which has made use of clinical images of the body is heir to only one of the models outlined above. While many of these newer studies are of limited scope, resembling Trachtenberg or Ruby more than Gilman, there is one significant way in which Gilman's work could be considered their direct forerunner. His identification of the role of the visual in the definition of otherness is a central theme in all of them. Looking at Gilman's extensive body of work, one is left with the impression that few non-dominant groups have been exempt from this process and this impression is only reinforced upon considering works by other

authors which address the role of the visual in defining gender (Cartwright; O'Connor), sexuality (Terry; Waugh; Crump), criminality (Hamilton and Hargreaves), class (Mavor; Pollack), racial otherness or orientalism (Maxwell), hysteria (Evans), and alcoholism (Rafter).

However, unlike Gilman, almost all of the above examples have limited their projects to the study of a body of work associated with a particular researcher or project. This goes a considerable distance towards solving the problem of addressing the circumstances under which the photographs were taken, in that the original researchers have left records of the photographic procedures and original aims of the project in their notes or the publication of their results. The recourse to text provides a kind of anchor for readings of images. Authors, such as Janet Beizer, Rhona Justice-Malloy, Martha Noel Evans, and Daphne DeMarneffe working with Charcot's images of hysterics at the Saltpêtrière have access to his writings, Thomas Waugh and James Crump to Kinsey's publications, Griselda Pollock, Anne McClintock and Carol Mavor to photographer/amateur sociologist Arthur Munby's notes, and so on.

Those studies which are not limited to a single source, are at least thematically and temporally limited. Peter Hamilton and Roger Hargreave's exhibition catalogue for The Beautiful and the Damned: The Creation of Identity in Nineteenth Century Portrait Photography is the most ambitious of these. Non-historians like Gilman, Hamilton, the sociologist, and Hargreave, the curator, examine what Sekula has referred to as the honorific and the evidentiary, or repressive, modes of portraiture and their mutual constitution ("The Body").[14] Like Gilman and Ruby, they use texts contemporary to the images to support their readings of conventional portraits and

[14] The focus of London's National Gallery on the relationship between portraiture and science is also evident in Ludmilla Jordanova's exhibition of portraits of scientists in 2000.

images from anthropology and criminology.

It is not, however, only through recourse to textual sources which speak directly about the photographs in question that they have attempted to solve the difficulties in approaching photographic sources. Hamilton and Hargreave also make reference to modes of study specifically calibrated to nineteenth century photography. Noting that "until recently the history of photography was either a history of processes or a history of art" (17) they identify "a third and more recent history incorporating elements of the previous two, that seeks to define the economic and social impact of photography and to place this into the context of the sweeping changes in the nineteenth century in demographics, science, technology, thought and culture" (17). In this, they explicitly refer to Trachtenberg, and, implicitly, frame their own project as being part of this third approach. Drawing as they do on the work of phototheorists, their text could be seen as a kind of high culture popularization of those ideas.

Something which attests to the penetration of the ideas of photo-theory (within the arts and the academy at least) is their possibly unconscious echoing in the structure of their exhibition of John Tagg's observations on the conditions under which nineteenth century photography was made meaningful. Although Hamilton and Hargreaves do not cite his work, Tagg's observation that "the political axis of representation had been entirely reversed. It was no longer a privilege to be pictured but the burden of a new class of the surveilled" (Burden of Representation 59), not only predates Trachenberg but also summarizes one of the major themes of the exhibition.

To continue, however, with the recognition of the necessity of contextualizing

the medium, a number of the problems which scholars faced in using photographs as source documents begin to be addressed. However, a new theoretical dimension comes into play for scholars who are particularly interested in the representation of the body. As noted above, many scholars who use photographs as primary sources are the heirs of Gilman, not merely in terms of subject matter, but also ideologically. Many of them are concerned with the power relations inherent in the photographic process and the kinds of looking that are licensed by it. Recent discussions of the photographic representation of the body under science rely not only on the historical contextualization of the media, but also on theoretical work which acknowledges the role of the photograph in the exercise of power in the interactions between photographers and their subjects. Griselda Pollock's article "Feminism/Foucault, Surveillance/Sexuality" would be a case in point. The theorization of how the images under consideration are implicated in the exercise of power relations between the photographer and his subject extends the understanding of the place of photography in the social and economic milieu to include an account of how the actors in this particular scenario are implicated in it. In this case the actors are the upper class amateur sociologist, Alfred Munby, and the subjects of his study, women who worked in coal mining operations and wore trousers.

The completeness of this archive and the care with which Munby preserved his images and notes in special wooden cases, as well as the erotic interest he evidently had in his subjects (one of whom, Hannah Culwick, became his secret wife), make this body of images particularly attractive. Of course, one can see that this attraction lies not merely the archive, but rather the interpretive possibilities it presents when approached in a theoretically engaged manner when Pollock writes that

the images "momentarily inched across the field of desire and law to proffer pornographic pleasure in the most unlikely fields—the fields of knowledge and power, where sexuality and surveillance mutually constructed each other in the interests of bourgeois men" (10). Other scholars, Carol Mavor and Anne McClintock have also written about the archive. Interestingly, both Mavor and McClintock have attempted to read the images against the grain, as Trachtenberg does, looking for evidence of agency on Hannah's part.

Others working in a similar vein who have found archival photographic representations of difference irresistible, despite the difficulties inherent in working with them, include Jennifer Terry and Thomas Waugh. In a series of articles and in her monograph, An American Obsession, Terry's subject has been the construction of homosexuality in science and medicine—an interest which began with the chance discovery of a number of clinical studies in a second hand bookstore in New York City (ix). Her reading of the photographs employed by various American researchers as a tool in the definition of homosexuality is based in her understanding of the larger projects of which they were part. Like Pollock and Mavor, Terry's focus on a body of images linked to a specific study allows the images to be contextualized in relation to the study, while the location of the study in a particular place and time allows for the consideration of the relationship between it and the larger culture. For example, Terry speculates about what conditions in the larger culture, such a Cold War fears of communism, might have fueled a particular interest in the search for embodied deviance at a given time (An American 329-352).

Waugh's more ambitious Hard to Imagine: Gay Male Eroticism in Photography and Film From Their Beginnings to Stonewall, is an example of a

successful project that extends beyond the study of the work of a particular researcher. Its success results partially from limitations in the scale of the project in terms of topic, medium and periodization, but also, paradoxically, from the book's comprehensive scope—it defines the project in such a way that it is broad enough to consider how the same subject, in the same medium, is framed in disparate but contemporaneous discourses of representation. The positive result of this is that the reader comes to see that no single mode of representation stands alone, unconnected to the others. Art informs pornography, which informs physical culture, which informs science, and so on.[15]

Of course, the difficulties involved in using archival photographs as a source for understanding past practices and social arrangements are by no means completely resolved. This is especially since what counts as an acceptable practice in one discipline might by inadequate in another. However, these attempts to use this material in a responsible, scholarly fashion have provided a foundation from which subsequent scholars can begin to build functional methodologies. Scholars wishing to work with archival photographs can draw upon this multidisciplinary body, adopting parts of it, and adapting it to their area of study and disciplinary standards.

While in this chapter the photograph has been considered for its potential value in scholarly study, in the subsequent chapter another aspect of the afterlife of the clinical photograph will be considered. In considering the archival image as a source, the focus has been on establishing reliable methodological approaches. In the next chapter the photograph's material nature, as an object to be collected, coveted and appreciated will be addressed. Although it may not be immediately evident, this a

[15] Something that distinguishes An American Obsession and Hard to Imagine from most of the other studies under consideration in this chapter is that they address images from the twentieth century.

natural continuation of the examination of the relationship between methodology and meaning. Just as how a photograph is approached can change how and what it means, a change in the circumstances of the physical object, such as a move from archive to collection for example, opens up the possibility of articulations to new discourses.

Chapter Five: The Collector and the Connoisseur

In this chapter the main figure under examination is Stanley B. Burns. Unlike the authors addressed in the previous chapter who are primarily academics, Burns is, first and foremost, a collector of photographs. A retired ophthalmologist, he is an amateur historian and founder of the Burns Archive in New York City. Rather than looking at his practice for a methodology for the use of photographs in historical study, the emphasis here will be on the role of Burns, the collector or connoisseur, in reframing and recirculating archival images. Studying his practices of collecting, editing, reproducing and publishing archival photographic images is, in some ways, like taking a guided tour of the afterlife of the clinical photograph. His impressive collection, the reframing of certain images in his monographs, and his collaboration with photographer Joel-Peter Witkin provide examples of how articulations to contemporary discourses imbue the clinical image with new scholarly, intellectual and aesthetic value.

Since the mid 1980s Burns has published a number books specifically dealing with clinical photography and several others dealing with related areas including photographs of the dead. Always careful to provide what information is available about the technologies used and the context in which the image was taken, Burns is in some ways the opposite of Sander Gilman. While Gilman uses photographs to illustrate findings from other sources, as discussed in the previous chapter, it is the image itself which is central to Burns's practice. I cannot help but wonder if this respect for the independence of images has to do with the context in which Burns encounters them. As a collector, he experiences these photographs not as reproductions neatly bound into collections, but as

physical objects which often come to him with no provenance or outside interpretation. The image literally comes first in his practice as a collector, and his decision to respect the primacy of the object could be a reflection of this fact.

Unlike Gilman, who, upon establishing a pattern of representation in literature, seeks to find evidence of it in visual sources, Burns presents his images in such a way as to suggest that they can stand alone. Comparing Burns's work to that of Gilman, it is quite possible that one might come away with the impression that Burns's practice is demonstrative rather than interpretive—more about showing than telling. Therefore, in order to bring into focus the interpretive nature of Burns's practice, rather than contrasting his work to that of others, I am going to compare different approaches within his published works.

This is a valuable exercise in that it demonstrates how photographs may take on new meanings as they are read in relation to discourses from various fields of study. Although Burns himself is aware of how photographic meaning can change when the images are taken out of their original context ("Nude in Medical Photography" 16), any one of Burns's texts taken by itself could give the impression that the photographs are indeed windows to the past, a kind of time travel. In this chapter, as a means of testing the transparency and truthfulness of these windows, I am considering how one image, when reproduced by Burns in three different contexts, tells three different truths.

Out of the 30 000 medical photographs Burns has collected, this particular image has appeared in at least three of his publications. Taken in 1878 by Dr. O. G. Mason, this image seems to exercise a particular fascination.[1] Originally produced to record a serious case of elephantiasis resulting from scarlet fever, in each reproduction the image is framed by Burns or his collaborators in a way that it comes to mean something different. The

[1] This is not the only Mason image in Burns collection.

image appears in 1987's Masterpieces of Medical History, in a 1996 article on "Nudity in Clinical Photography" in the Journal of Biological Photography and again in his most recent collection entitled A Morning's Work (figure 7).

The first publication, Masterpieces of Medical Photography is, essentially, a kind of coffee table book where the images appear to be left to speak for themselves. Composed predominantly of photographs reproduced from the Burns Archive, it incorporates very little text, relying on an introduction by Burns's collaborator, artist Joel-Peter Witkin, and an afterword by Burns himself, to frame the images. Short commentaries at the end of the book which are keyed to each image explain the clinical bases for the conditions pictured. As far as what the particular photograph under consideration is made to mean in this context, one needs to consider how Burns and his collaborator frame the image both textually and aesthetically.[2]

To begin with, Witkin's presence as editor and collaborator in itself conditions how any viewer familiar with the contemporary art scene would approach the book and the images in it. Known as an outsider artist and bad-boy photographer, Witkin's established reputation as a photographer of models with unusual bodies in baroque settings contextualizes this collection of images as a curatorial or editorial extension of his studio practice. Anyone looking at Witkin's own images would understand his attraction to the Burns Archive (figure 8). Both the subjects and the settings seem drawn from the same universe. Both sets of images are populated by figures, both living and dead, whose extraordinary bodies are displayed against what seem to the contemporary viewer quasi-theatrical nineteenth century backdrops. The images Witkin makes himself are further coded as historical through a deliberately rough treatment in their processing that

[2] Burns collection and extensive knowledge make him a very desirable collaborator and consultant (Naythans and Styron).

introduces such elements as cracks and dust, giving them an appearance of age and use, not unlike that of the images drawn from the archive. Such are the similarities that one could go farther than thinking of Witkin's contribution to Masterpieces of Medical Photography as being merely curatorial, and consider the images as a kind of found art. For Witkin the archive could be a repository of ready-made photographs.

It is not merely, however, the status of Burns's collaborator as a contemporary artist which conditions the reading of the images found in this text as art. The aesthetic decisions made concerning the format of the book also condition this particular reading. The title of the book provides the first clue that these works are being considered in relation to discourses of art and aesthetics. By identifying the images inside as "masterpieces" Burns and Witkin are elevating the clinical image to the level of high art, using what is now a somewhat suspect category in art history. The concept of the masterpiece, along with the related category of the artist-hero or genius, recalls a practice of art history in which certain images were designated "art" to the exclusion of all others. Rather than create ties to contemporary art practice as one might expect considering Witkin's position, this designation draws on the prestige of the canonized masters of painting. He writes, "[t]hese images, and others I studied in subsequent meetings, were a human, historic and cultural treasure; masterpieces" (Witkin n. pag.).

It is interesting that Witkin, the outsider, has chosen to valorize these historical images using the ultimate insider rhetoric of the masterpiece which was long used to keep photography generally, and clinical photography absolutely, out of the academy. His approach is an anachronism from earlier periods of art history when arguments for the inclusion of photography in the canon of the fine arts were all framed in relation to the standards of painting. The result of these arguments was that certain kinds of

photography (pictorialism and then straight photography) were accepted into the canon, which was, like painting, told as "the history of remarkable men [...] of remarkable images" (Solomon-Godeau, Photography xxv). The creation of the photographic canon is a relic of high modernism, in which pure form was valourized over discussions of content.

However, having read some interviews in which Witkin discusses his own practice I can only postulate that he does not see himself as part of contemporary art and its concerns over representation and the political sphere demonstrated by the kind of artist-theorists introduced in chapter two. It seems that Witkin's use of the concept of masterpiece to describe the archival images which echo his own products reflects his understanding of himself and his works. In one interview he explains that like modernists who "made work for their own discovery, period," he says he considers, "only my own reaction, only my own response" (Berry 36). This is echoed in his frequent description of his pieces as being either as a kind of prayer or personal journal. He further defines himself as an inspired (or tortured?) artist-hero, though a kind of self-mythologizing. Aspects of this mythology include: a catholic upbringing; a mother who worked in a DDT plant; the witnessing of the accidental decapitation of a little girl in an automobile accident when he was a child; a first sexual experience with a hermaphrodite (Wilson), and the expressed desire to photograph UFOs (Buck and Alevizakis). His decision to define himself through the concepts and terminology of a previous generation of art criticism could be an effective way of further identifying himself as an outsider, side-stepping any difficult questions about content and, finally, defining his artwork as the ineffable expression of heroic, inspired aesthetic vision.

Furthermore, there is a tradition within modernism of photographers contributing to the construction of the canon not only through their own photography as through the

discovery of forerunners whose practice might legitimate their own. Consider Berenice Abbott's discovery of Eugene Atget and Lee Friedlander's discovery of E. J. Bellocq. Abbott and Friedlander both came into possession of the negatives of a lost "master" and reprinted the images. Through their advocacy the work of these rediscovered ancestors found its way into the canon through the Museum of Modern Art under the direction of John Szarkowski (Solomon-Godeau, Photography; Rosler 117). Witkin's role as co-discoverer of the aesthetic content of clinical masterpieces is not so very different.

While it might be surprising that a figure in contemporary art might define a series of archival images as masterpieces, thus recuperating them as part of the photographic canon, it is not surprising that this language would make sense to Burns, an outsider to the art world. Most popular representations of art and artists rely on it, and it certainly would have been the dominant discourse during Burns's youth and education. Furthermore, the particular image under consideration, being a draped, unclothed figure, already echoes the category of the nude, which, as discussed in chapter three, has been one of the most significant iterations of the masterpiece, both in the art world and in the popular understanding of what constitutes art. Interestingly, Burns uses the term himself to describe another Mason image (Burns "The Nude in Medical" 16).

The framing of this image and others in the text as masterpieces is not the only element of their presentation which encourages the viewer to appreciate these photographs as unique objects of aesthetic value. The photographs in Masterpieces of Medical Photography are published one per page with accompanying titles and dates. This format, borrowed from fine arts, encourages the viewer to respond to these images for their aesthetic content. Like the white walls of the gallery, the presentation of the (reproduced) photograph suspended on the blank page has an auratic effect, marking the

image as unique. The emphasis on the aesthetic aspects of the work is no accident. Burns, who describes himself as having "always been a collector" speaks of his discovery of the "artistic strength" of these images and hopes that this book will "offer a new perspective on the archive to an audience interested in the fine arts" (Afterword n. pag.).

In this presentation of the image, the mythologizing tendencies addressed by both the theorists and historians of photography considered in the previous chapters are evident. Witkin in particular seems to fall prey to certain clichés such as the idea of the transparent truth of the image which he calls a "permanent mirror of memory" (Witkin n. pag.). In the same vein, his description of the images as masterpieces also emphasizes their timelessness. Of course, the timelessness of the masterpiece is the antithesis of the specificity desired by historians and theorists. Arguing that something is a treasure for all time can mitigate against an understanding of it as a product of a specific culture at a specific moment. This gesture places the image outside of the flow of time and beyond criticism. When Witkin writes, "[i]t (the masterpiece) has nothing to do with the history of taste and everything to do with achieving the highest knowledge of ourselves" (n. pag.), I wonder if, in trying to make the images mean everything, they have ended up meaning very little.

When Witkin sees in these photographs an impulse from the "archaic past" which permitted a kind of "transference of consciousness from one living being to another, emotional need becoming physical form" (n. pag.), one cannot help but be reminded of Roland Barthes's search for an image which conveys the essence of his mother allowing him some kind of contact with her that crosses the boundaries of death and time (Camera Lucida). Imbuing a technology with such magical functions such as ineffable truth or time travel is a poetic gesture which attests to our desire for such things. It does not, however,

contribute to our ability to use photographs as source documents which might facilitate a better understanding of the past. Just as early consumers of portraits were driven by a desire for contact with absent or deceased loved ones, we can see Witkin's desire for a similar kind of magical functioning. However, in the same way that the images of the absent or dead, though comforting, are ultimately unsatisfying, so is this mode of analysis or criticism of the archival clinical image. Witkin's final assertion that "[t]hese images are triumphant contributions in the evolution of the quest for our highest attainment, to unselfishly help and heal one another, to eradicate all disease, both social and pathological" (Witkin n. pag.) certainly sounds noble, but it is difficult to say exactly how they might do such a thing, particularly in this highly aestheticized presentation.

When the photograph is reproduced for the second time in the Journal of Biological Photography, Burns, now a primary author, provides a different interpretation of the Mason image. In this article, entitled "Nudity in Clinical Photography: A Literature Review and Quest for Standardization" we are invited by Burns and his co-authors Michael Peres and David Teplica, to view the image not as a masterpiece, but rather as a guide to improving contemporary clinical practice, and addressing the possible moral ramifications of producing images of unclothed people.

In a section of the article entitled "Review of the Historical Body of Nude Medical Images" Burns hypothesizes that any current lack of standards is nothing more than a continuation of the status quo, referring to examples from Masterpieces to prove this point. He also addresses the possibility that, out of their original context, clinical images might be interpreted differently, having a number of things in common with such practices as portraiture or even pornography. Speaking to the professional biomedical photographer, he suggests that this undesirable uncertainty and any potential moral issues

can be avoided through standardization and the effort to strip images of "unnecessary social and political content" (Peres, Teplica and Burns 4).[3]

One of the reasons for concern about the misinterpretation of images is the increasing scholarly and artistic interest in clinical photographs (as evidenced by Burns and Witkin's collaboration) and the practice of appropriation, which remove the images from their original contexts ("Nudity in Clinical" 11). For example, Burns points out the strong similarities between Witkin's work and some of the images in Masterpieces of Medical Photography. He concludes, however, that because Witkin is practicing in a different field of image-making it is not relevant that Witkin seems to violate all the standards found in the ethical code of the BPA's Registered Biological Photographer Program. While this is probably true, Burns's further argument that Witkin's "critical acclaim and creative success illustrate that medical photographic standards and medical ethics issues are not considered relevant in the current fine art climate" (Peres, Teplica and Burns 11) is problematic. Coming from a feminist theoretical perspective, I am doubtful about this construction of artistic representation as being outside of the realm of ethics, and am certain that there is no direct negative correlation between critical acclaim and ethical culpability.

Also interesting is the fact that Burns's apology for Witkin's work as existing outside the ethical framework under discussion (and perhaps outside of any ethical framework) is preceded by Burns's own reading of the image of the girl with scarlet fever as an example of how some historical photographs, when out of context, could be understood as art or even erotic art. He provides an analysis of the image as follows:

> She was probably beautiful as her history suggests and her body was

[3] The history of this project and the professionalization of clinical photographs in general is examined at length in the next chapter.

> obviously voluptuous from the waist up. The face was covered in a veil-like manner in oriental fashion [...]. Curiously, covering the face in a flowing veil manner presents a provocative and exotic image. (Peres, Teplica and Burns 9)

With this analysis, an image which was originally produced for clinical purposes, then subsequently presented as an artistic masterpiece, has now been reinterpreted as an erotic image and a kind of object lesson for contemporary clinical photographers.

The language Burns uses in this reading is striking. A photograph which, up until this point has been understood in terms of suffering, medical curiosity, rarity, or formal aesthetic considerations is now read for erotic content, being described as provocative, exotic, and voluptuous. Particularly interesting is the reading of the cloth over her head as a "flowing oriental veil" (Peres, Teplica and Burns 9). Burns in other descriptions of images is usually careful to contextualize and explain any aspects of the images which might be unclear to a contemporary viewer. Anyone with an interest in nineteenth century clinical photography would recognize that the cloth draped over the woman's head is a crude attempt at preserving patient anonymity and dignity. Having seen similar attempts to preserve patient anonymity in the Journal of the American Medical Association (JAMA) in the course of my research, I had responded to such images as well-intentioned but ultimately misguided efforts to ensure patient anonymity. Although the patient's identity was hidden, the jury-rigged nature of the provisions (often a hospital towel is used) made them seem like a kind of afterthought—almost highlighting the indignity and discomfort of being in the position of being sick and the subject of photographic scrutiny. That, in the context of an article about moral and ethical concerns, Burns would first fail to identify this common practice for the reader, and then read it in

such a romantic way, is surprising. The eroticization of this image of a woman who was terminally ill seems a kind of massive failure of empathy.

It seems possible, however, that this eroticized reading is perhaps a natural outgrowth of the reading of the image as a masterpiece. As noted above, the nude was one of the main subjects of oil painting and was frequently presented as an object of erotic delectation as well as aesthetic enjoyment. If in one text this image of a nude female figure is discussed as a masterpiece, then it is not surprising that it might be eroticized in the next. The cloth used to preserve patient dignity, in this context, becomes the drapery of the classical nude.

The readings of the image as first artistic and then erotic are the result of the articulation of the clinical image to non-clinical discourses. I would argue, however, that the link to these particular discourses is not arbitrary. After all, while photographic meaning seems slippery, an image cannot be made to mean any given thing, neither are articulations to new discourses random. Instead, it seems likely that these new readings are an amplification of tendencies already present in the historical conditions under which the images were produced. It is vital to consider these conditions because, as John Tagg puts it, the historical circumstances of their creation continue to shape photographs in what they "do and do not do, in what they encompass and exclude, in the ways they are open to or resist a repertoire of uses in which they can be meaningful and productive" (Burden 65). He continues, "[h]istories are not backdrops to set off the performance of image. They are scored into the paltry paper signs" (Burden 65). As such, the reading of the Mason's image first as a masterpiece and then as erotic is not surprising if one considers the visual culture of the nineteenth century. Mason, the photographer who produced the image, was certainly familiar with reproductions of masterpieces of Western

art featuring draped nudes, as well as pornographic images which drew from the same visual vocabulary. Furthermore, as noted in studies on the nude discussed in chapter three, the line between art and eroticism is blurry even at the best of times. If anything, Burns's and Witkin's contemporary readings of this image as artistic and erotic are evidence of the longevity and durability of these interconnected visual discourses as they relate to the female nude.

To show that these articulations to ideas about the nude were not unique to this image, it is interesting to consider the other Mason image from the Burns Archive reproduced in another article in the same journal. This second image shares many characteristics with the first. A young, naked woman pictured in what Burns describes as "a classic pose" is shown standing in the middle of the image, framed by the drapery of her half-removed petticoat and skirt. Again the figure is made anonymous, this time by "[p]olitely cutting off half the face for discretion's sake" (Burns "Nude in Medical Photography" 16)—something that Burns notes was most common in the case of "beautiful women" ("Nude in Medical Photography" 26).

However, despite the eroticized reading of the original image, surprising for its inclusion in a text on ethical standards and patient dignity, I finally do not believe that Burns really does lack empathy in the grand scheme of things. In his most recent collection of clinical images, A Morning's Work, Burns reproduces the photograph a third time. Following the model of Masterpieces of Medical Photography this new text again presents the images, one per page, with explanatory entries at the end. This time, however, the introduction is written by Burns himself and he makes it clear that one of the chief functions of his collection is to document the advances made by modern medicine. Unlike Witkin who alludes to this function in a quasi-mystical fashion, claiming

the eradication of all social and pathological disease as the automatic (and unexplained) effect of the circulation of these images, the benefits to humanity which Burns identifies as resulting from this publication are much more concrete—they are those resulting from the practice of modern medicine. Unlike the images in Masterpieces of Medical Photography which are described as a gift from the past, somehow magically showing ourselves to ourselves, "harmed, unloved, deformed, even dead" (Witkin n. pag.), the same images in A Morning's Work are being framed as truthful documents providing access to a vanished past which has been obliterated by the practice of modern scientific medicine. As both a testimony and a celebration, these photographs are the unhealthy "before" to the healthy "after" of our modern bodies. Burns's emphatic and perhaps nostalgic assertion of his belief in the promise of a heroic scientific medicine reinscribes the central spectacular pleasure of this image as being one of knowledge. No longer is the Mason photograph to be appreciated as a timeless masterpiece, for flowing drapery, or the erotic potential of the unclothed body. Now it is evidence of progress.

Of the three reproductions of the image under consideration here, it is this last, prefaced by Burns's testament to the achievements of modern medicine and its role in the alleviation of suffering, which provides an iteration of the image which is closest to its original function as a truthful, objective, transparent document. The question arises, however, whether or not this evocation of the photograph as evidence can reinstate the original character of the image. To begin with, the conception of the original character of the image as unary or singular is problematic, as discourses other than science and medicine surely affected the image's production, circulation and preservation. Furthermore, the passage of time and the recontextualizing of the image as part of a collection, at the very least result in additional articulations to discourses of historical

value and rarity. As Sekula writes "to regard an object as an artifact is to reinvent it, to superimpose a new meaning on the past, and therefore to mutate all earlier senses of the object" (33).

This is not to deny, however, the desirability of reading of these images as transparent testaments to science, progress and human achievement. After all, in some sense, that is what they are. Of course, the problem arises because they are also more than that. It is not surprising that Burns with his medical training and practice would choose to see them this way—and it is a choice. Well aware of critiques of positivist attitudes in scientific medicine, Burns rejects such tendencies, castigating "postmodern ideologues" for undermining the benefits that those of us in the West have reaped from modern medicine.

It is also possible, however, that Burns's justification of collection and connoisseurship as serving the greater good of documenting medical achievement might be a kind of response to the difficult themes around which his collections are organized. In addition to specializing in clinical photographs depicting illness, his two other major areas of interest are posthumous portraits and photographs of lynchings in America. Despite having become acclimatized to such images—to the extent that, when his father passed away, Burns and his brother had a final family portrait made (Sleeping Beauty II)—it remains the case that these images depict illness, death or violence. It could be that Burns's valorization of the collection as a testament to modern medical practice might be a way to balance the pleasure of the collector against the uncomfortable knowledge that the rare, and thus desirable, object finds its genesis in a moment of human suffering.

It is clear that Burns really wants the images in his collection to serve as source material for the improved understanding of history—a field which seems to him to receive

little respect or appreciation in American culture at the moment. Insightfully making the distinction between history and heritage, noting that many people would prefer the latter, he writes that "[h]eritage is the day dream of our historic past, the good stuff we selectively choose to remember, and which often changes; history, on the other hand, is the entire picture—the good and the bad" ("Nude in Medical Photography" 16).

While he notes the elevation of archival photographs to the status of art and their entry into the art market, for Burns the biggest problem confronting the historian is the change in attitudes which occurs over time and with it the resulting desire for "heritage" and the tendency to whitewash, ignore or distort uncomfortable aspects of the past. He notes that "lynching, photographing the dead, and evaluating our fellow citizens by body shape was in various eras as American as apple pie" ("Nude in Medical Photography" 17). He claims that "[o]riginal photographs, captioned in the period, remain the best evidence of past events" ("Nude in Medical Photography" 17) and the best means of countering denial and revisionism. However, this identification of the archival photograph as the best evidence, makes the project to develop methods for working with archival images all the more pressing. If historians and others are unable to use such painful images in theoretical sound and profitable ways, then the images in Burns's collection will not make the positive contribution he hopes they will.

In order to contribute to the understanding of past practices for what they tell us about the contemporary world, photographs cannot be assumed to be merely objective depictions of what was. More is required on the levels of theory and practice. As outlined in the previous chapter, historians have been very cautious about using photographs as primary sources. This is essentially because of the simultaneous problems of the photograph being at once too obvious and too uncertain in terms of meaning. Photographs

seem to show the viewer something in an objective way, but serious difficulties ensue when one tries to pin down exactly what is being shown and what it meant. The trajectory of the Mason photograph from clinical image, to masterpiece, to the eroticized subject of an orientalist gaze, to an object of knowledge, demonstrates Tagg's assertion that photographic meaning, as well as being constructed, is inherently multiple (Burden 187), re-emphasizing the necessity of establishing a methodology for the use of archival photographs as source documents.

In addition to addressing how links to new discourses over time could change the meaning of an image, this chapter also briefly considered how an image might be shaped by the discourses prevalent at the moment of its production. In this case articulations to non-scientific discourses, such as art and beauty, circulating in the culture resulted in clinical images informed by the visual vocabulary of the nude. The subsequent chapter provides a case study, demonstrating more fully what can be gained by the careful contextualization of a particular photographic practice. Following the model of some of the theorists in chapter four, particularly Trachtenberg, who drew attention to the value of contextualizing early clinical images and practices in relation to nineteenth century discourses, chapter six concerns the circumstances under which twentieth century images were produced. Rather than consider the conditions of the production in relation to a single series of images, as some of the authors addressed in the previous chapter have done, here modern clinical photography as a whole will be considered in relation to influential discourses in the period which saw the professionalization and standardization of the practice.

Chapter Six : Clinical Photography Post-World War Two: The Cultivation of a New Visual Vocabulary

As we have seen in preceding chapters, early clinical images do not look particularly scientific to contemporary eyes. Often using the same technologies, same studios, same conventions and the same modes of presentation, such as cartes-de-visites, clinical images are sometimes indistinguishable from portraits, except for evidence of pathology such as wounds or lesions or sometimes some element of nudity. It is only in the twentieth century that the modern clinical image begins to make its appearance. The changes that resulted in this new aesthetic should not, however, be read as merely the natural result of photographers making use of the various technological advances which any general history of photography chronicles, like negative/positive processes, dry plate technology, roll film, flash equipment, panchromatic film, single lens reflex cameras, and so on. These changes were promoted by and reflected in the discourses of what constituted a good medical photograph which proliferated with the consolidation of medical photography as a specific practice, and the concomitant professionalization and organization of medical photographic practitioners. In this chapter the features which constituted this desirable new aesthetic will be identified, along with the reasons which were given for the adoption of this look and what results this might have had. Having considered the official rationale for the cultivation of this aesthetic, I will conclude by considering other possible discourses which might have influenced its adoption in the practice of clinical photography.

It is acknowledged by a number of sources that it was during the postwar period

that medical photography came into its own in Britain and North America (Dittman; Williams; Hansell). Movements toward professionalization and organization begin to appear around 1920, the date which collector and historian Stanley Burns identifies as the closing years of early medical photography. Evidence of professionalization may be found in the formation of associations and the periodicals they sponsored. The first journals appeared around 1930 and continued through the Depression years with Kodak publishing a slim booklet in 1932 describing the "equipment and technic for making still pictures of clinical subjects" (Clinical Photography 4). The greater access to resources in America during the Second World War allowed the field to make what one author referred to at the time as "tremendous advances" (Dittman 19) and the period is generally regarded as a turning point in the fortunes of the profession (Williams 142). The first major text, Longmore's Medical Photography, was published in 1944 and it is from this time that works on the subject began to appear regularly. In 1950, Stanley McComb notes "a progressive increase in the use of photographic medical illustrative material" between 1930 and the time of writing (3). Later, looking back, influential photographer and author Peter Hansell writes that "[t]he entire practice of medical photography and medical illustration as we know it today may be said to have been pioneered over the last quarter of a century" (5) between 1950 and his own Guide to Medical Photography published in 1979.

However, the telling of the story of the professionalization of clinical photography as sweeping upward in a smooth curve toward scientific clarity and perfection would be overly simplistic. The various authors' consistent concerns regarding the same issues over several decades are evidence of slow and uneven progress. Some authors also note that up to and even after the war some physicians and institutions did

not see photography as having a useful place in medical practice (Dittman 20), while others writing in the postwar period were still looking forward to the day when "medical photography will become recognized and established as an essential adjunct service in the modern hospital" (Sutton 57).

Other important evidence of the slow progress is the fact that, despite the increasing professionalization, the figure of the physician-author-photographer co-exists with that of the full-time medical photographer. Many articles and texts were written with both audiences in mind, including the Kodak publications and Currie and Smialowski's texts, and it is acknowledged in a number of other publications (Hund 21; Gibson, Medical Photography vi; Gibson, "The Kodak Technical Outfit" 92). This suggests that the goal of many authors was to promote the production of more professional images even when the photographer him/herself was an amateur. One author identifies himself as an amateur, saying in the introduction to his article, that as a surgeon author "who does his own photography, albeit from necessity not choice" he "feels no little embarrassment in writing for professional photographers" (Fallon 61). Although Nakamura, for one, sounds the death knell saying in 1971 "the day is fast disappearing when a practicing physician can be also author and illustrator of his text" (17) the physician-photographer still exists today (Peres, Teplica, and Burns 12).

The kind of comprehensive overview of the development of the clinical image undertaken here is possible because, as Hansell notes, "few authoritative texts on the subject have emerged" as a result of "the compact nature of the specialty" (5). Primary sources include a dozen instructional texts on the subject of medical photography published between 1932 and 1979 by authors from the United States, and the United

Kingdom, including Canada.[1] These include the following:

1932 - Eastman Kodak Co. Clinical Photography: As Applied to The Practice of Medicine and Surgery. New York: Eastman Kodak Company, Medical Division.

1950 - Josephine Hunt. An Introduction to Medical Photography. NY: Staples Press.

1944 - Thomas A. Longmore. Medical Photography: Radiographic and Clinical. London: Focal Press.

1950 - Stanley J. McComb. The Preparation of Photographic Prints for Medical Publication. Springfield, Ill.: Charles C. Thomas.

1952 - reprint 1960 - H. Lou Gibson. The Photography of Patients: Including Discussions of Basic Photographic and Optical Principles and Infrared Techniques. Springfield, Ill: Charles C Thomas Publisher.

1953 - Kenneth S. Tydings. A Guide to Medical and Dental Photography. New York: Greenberg.

1960 - Donald J. Currie, and A. Smialowski. Photography in Medicine. Springfield, Ill: Charles C Thomas Publisher.

1961 - Eugene F. Linssen. Medical Photography in Practice, a Symposium. London: Fountain Press.

1962 - Donald J. Currie, and A Smialowski. Photographic Illustration for Medical Writing. Springfield, Ill: Charles C Thomas Publisher.

1962 - Thomas A. Longmore. Longmore's Medical Photography. revised and edited by Peter Hansell and Robert Ollerenshaw. London: Focal Press.

1973 - H. Lou Gibson. Medical Photography: Clinical-Ultraviolet-InfraRed. Rochester, NY: Eastman Kodak Co., 1973. (This is a reprint of Kodak's

[1] Although there are certainly differences in the development of clinical photographic practice on both sides of the Atlantic (Williams 20) there is also evidence of dialogue between practitioners. UK authors cite the work of their North American counterparts and vice versa and visits were made to exchange information. The medical photographic community in Canada seems to be strongly linked to the American, with Currie and Smialowski from Toronto publishing in the same journals and with the same publishing house as their American counterparts.

1972 publication with new sections on Ultraviolet and InfrarEd.)

1979 - Peter Hansell. A Guide to Medical Photography. Lancaster, UK: MTP Press.

This list represents the major texts published in this time period. Of these, the only one which I have been unable to locate is Josephine Hunt's An Introduction to Medical Photography (1950). Periodicals in the area have been surveyed for the duration of their publication. These include the U. K. based Journal of Medical and Biological Illustration, established in 1951 and changing its title to the still-published Journal of Audio-Visual Media in Medicine in 1977, and two major periodicals published in the United States: the Journal of the Biological Photographic Association (est. 1932), later called the Journal of Biological Photography, and Kodak's Medical Radiography and Photography (est. 1924). Articles culled from these are used to expand and complement the handful of texts.

The improvement of the clinical image is often explicitly identified as the author's main goal. The introductory article in the first edition of the Biological Photographic Association's journal states that the association was formed so that members could discuss "ways and means of producing perfected biological photographs and standardizing procedures" ("Introduction" 1). Later on, Stanley McComb states in The Preparation of Photographic Prints for Medical Publication (1950) that "suggestions are offered for the correction and improvement of some of the defects of medical photography commonly encountered" (4).

Examining the contents of the books and considering the subjects of articles written about the practice of medical photography, there seem to be two major types of information the authors are attempting to impart in order to further their goal of an

improved clinical photography. The first type, which I am designating "technical information," is by far the most voluminous. Almost without exception, great portions of the books and periodicals are given over to information designed to aid photographers in the production of technically immaculate images. The suggestions for "correction and improvement" largely consist of material concerning the choice of equipment, the details of various chemical processes, or, on occasion, the filing and indexing of images. Much of the optical and chemical information could have been lifted wholesale from contemporary treatises on photography.

The sections dealing with this type of information are of a sort of Scientific American variety and concern the minutiae of the construction of certain apparatuses and the use of particular chemicals or equipment. Phrases like "[s]uch a light-box is not available commercially but can be easily built by a photographic department which can call on the slight assistance of a carpenter and an electrician" (Harrison 333), "the degree of magnification will depend on the focal length of the objective and the eye-piece" (Longmore, Longmore's Medical Photography 444) or "a stock solution containing sodium sulphate is usually made up as concentrated as possible to prevent oxidization" (Longmore, Longmore's Medical Photography 126) are characteristic. Although these are important in that the energies of many members of the various professional organizations went into addressing these technical concerns, clearly they are not of primary interest in this paper. A more efficient camera stand, a new film processing technique or other such considerations do not specifically address the aesthetic of the clinical image.

In contrast to concerns over chemistry, optics and bureaucracy, it is the relatively non-technical aspects which govern the "look" or visual vocabulary of the clinical photograph. They deal with such issues as framing, focussing, lighting and the

arrangement of elements in the photograph such as drapery, clothing, backgrounds and, most importantly, patients. Although these sections are usually small in proportion to the rest of the text, they are of greatest interest and may be found under such various headings as: Photography of the Living Subject (Longmore, Medical Photography); Photography in Orthopaedics, Pediatrics, or Dermatology, Photography of the Breast or of the External Genitalia (Smialowski and Currie); Positioning and Handling (Gibson, Photography of Patients); Standardization of the Head and Face, Standardization of Other Regions (Longmore, Longmore's Medical Photography); and Photography of the Patient (Engel). In fact, the primary feature which distinguishes the text or periodical destined for the use of the medical photographer from those directed at other kinds of photographers is the inclusion of information on patient management and posing.[2]

In articles and texts concerned with remedying the practices of medical photographers' predecessors and contemporaries, the double ghosts of the ideal photograph and the flawed image against which it is defined are constantly hovering in the background. The flawed image is sometimes described with reference to the early images (generally recognized as originating in the period between 1840 and 1920) which are used as examples of everything which the modern medical photographer ought to avoid and described by one author as "sometimes grotesque or in poor taste" and "decidedly unprofessional in tone by today's standards and risible" (Nakamura 51). In other texts, McComb's for instance, the faults he is seeking to correct are not historical, but, instead, are evident in a survey of published medical illustration at the time of writing.

Seeking to identify what features characterize the polar opposites of the ideal and the flawed image, I have compiled the following list to outline the features ascribed to the

[2] In fact, texts on scientific photography bear considerable similarity to those on clinical photography and are sometimes written by medical photographers. Peter Hansell has authored books and articles in this area.

ideal photograph in the texts under consideration. I have included references to show from which texts each dictum was drawn. As I am sure the reader will note, Smialowski and Currie's Photography in Medicine (1960) was a particularly fruitful source. A good image has the following features:

- standard positions (Whitley 235; Evatt 211; McComb 11; Gibson 76)
- even lighting (McComb 28; Gibson 14)
- sharp focus (McComb 5; Gibson 27)
- a plain and unobtrusive background (Marshall 13; Whitley 233; McComb 22; Smialowski and Currie 137; Gibson 23)
- good subject/background separation (Smialowski and Currie 153; Gibson 87)
- no floor/wall separation (Smialowski and Currie 160; Gibson 25)
- no obtrusive furniture or supports (Smialowski and Currie 137; Gibson 23)
- landmarks in close up shots (Evatt 198; Smialowski and Currie 158; Gibson 77)
- provisions for the preservation of patient anonymity[3] (Currie and Smialowski 61; Smialowski and Currie 172)
- no make up/ lipstick (Smialowski and Currie 160)
- men clean shaven (Smialowski and Currie 160)
- "neatly arranged" hair (Smialowski and Currie 160)
- clothing hidden/removed (Evatt 198; McComb 38; Smialowski and Currie 160)
- assistant's clothing draped or covered (Smialowski and Currie 217)
- no "distracting" jewelry (McComb 38, Smialowski and Currie 160)
- no dressings or surface medications (Longmore 1962 289)

[3] Most texts agree that this is important. Gibson, with a characteristic sense of humour suggests that some means of preserving anonymity have their drawbacks. He suggests, for example, that ballroom masks ought to be avoided because they result in the rather droll effect of the patient looking like "Marie Antoinette on her way to the shower" (Medical Photography 83).

• breast/pubic areas covered with binders unless otherwise directed (Smialowski and Currie 140, 142)

In some cases the reasons for the cultivation of certain practices are clearly identified. With series photographs of the same subject, the standard positions, lighting, and so on allow for reproducibility so that the patient's condition can be tracked over time (Gibson, Medical Photography 75; Longmore, Longmore's Medical Photography 307). Of course, these kind of standardization techniques are also useful for non-series images so that a physician or researcher can compare one case to another. It is also pretty clear why sharp focus and good depth of field would contribute to the usefulness of the image. However, not all the suggested reforms are so obviously functional. Many of the recommendations above are suggestions to avoid "distracting" details which are supposed to decrease the legibility of the photograph. It is a term which appears again and again in the texts. From the list above, non-standard backgrounds, the division between the wall and floor, walkers or crutches, eyeglasses, wristwatches, earrings, furniture, patients' and assistants' everyday clothing are all specifically referred to as "distracting."

It is evident that there is some basis for identifying "distracting" elements as undesirable. Looking at photographs included in articles published in the Journal of the American Medical Association prior to the 1930s there are a prodigious number of images which are absolutely replete with such elements. There are cases where the jumble of furniture, front porch steps, cushions, dressings, bedclothes, and parts of the patient's, and sometimes the assistant's, body and clothing make the photographs very difficult to read. McComb provides what he considers an extreme example of this (39) and Gibson even goes so far as to create an example of the quintessential flawed background (Medical Photography 24) (figure 9).

However, there are also many photographs which are quite functional and clearly show the features or lesions which the authors are discussing despite the inclusion of one or more "distracting" features. Hansell, a major figure in British clinical photography and the author of a 1979 prescriptive text, is also something of a historian of the field. In an article, entitled "A Backward Glance" he recognizes that some early images "made before the First World War [...] should even now induce in us a certain sense of humility" (138) and that some photographers "ably demonstrated the value of photography in medicine almost half-a-century before the subject became established in its own right" (139) (figure 10).

Furthermore, if one were to look for evidence that elements often labeled distracting can be acceptable, one would need to go no further than the instructional texts themselves. Many of the model images included in the texts to demonstrate proper technique include "distracting" elements! This causes me to wonder if the amount of space and concern devoted to eliminating distracting elements is proportionate to the actual difficulty they cause[d] in the reading of photographs. For one thing, I do believe that the authors are overestimating the level of fascination exercised by a crack in the wall behind the patient or a piece of jewelry. Smialowski and Currie, writing on pediatric photography, note that "the patient's interest is easily diverted and it is difficult to hold his attention" (213). This description seems equally fitting for the imaginary physician to whom the medical photographer is catering by eliminating distracting features.

The putative ability of an electrical outlet or the edge of a rolled up shirtsleeve to distract the physician and draw his or her attention away from lesions or other features of a patient's exposed body seems to almost parallel the capacity of what theorist Roland Barthes refers to as the "punctum" in Camera Lucida. He defines the punctum as that

element of the photograph that pricks or stings him (27). Like the distracting element in texts on medical photography, "[v]ery often the punctum is a "detail" (43)—"a detail which overwhelms the entirety of (his) reading" (49). The sharp interest sparked by this detail differs from the general commitment or application to an image or a class of images which Barthes refers to as "studium" (26). Following this schema, the ideal image to which medical photographers are aspiring would be invested with no more than studium. It would be what Barthes would refer to as a "unary" photograph—that is, one with no duality, no indirection or disturbance. The punctum would be a detail in this otherwise unary space which attracts one and changes one's reading of the photograph (Barthes 42). Like the distracting element in the medical image, he writes that the punctum or "detail which interests me is not, or at least not strictly, intentional, and probably must not be so" (47). For Barthes such a detail "occurs in the field of the photographed thing like a supplement that is both inevitable and delightful" (47). The punctum is that which draws him into the picture and often into the secret life of the person pictured. It seems that this is exactly the kind of distraction that medical photographers would want to avoid.

However, not every photograph pierces Barthes. The detail which interrupts the studium is the exception rather than the rule. Even if the "distracting" elements of flawed medical images do on occasion pierce the viewer, it seems impossible that they do so in every instance. Additionally, the punctum, as Barthes describes it, is not only rare, but also at times unlocatable. Some images hold him, though he cannot say why (54). This elusiveness seems characteristic of Barthes's experience of the sharp detail, as he claims "that which he can name cannot really prick him" (51). So, in addition to being rare, the punctum is particular to the viewer and not always immediately identifiable. It seems that a phenomenon which is an accidental, unintentional, elusive, personal disturbance and

therefore largely uncontrollable, cannot be the chief concern of the medical photographer seeking to eliminate distracting details.

There are, however, some clues as to what the medical photographer's concern with "distracting" elements might be, if not that the viewer might fall into the accidental reverie of Barthes's punctum. One of the most pointed of these comes from a later text, which H. Lou Gibson, probably the most influential author publishing on clinical photography in America in the post-war period, wrote for Kodak as a kind of summation of his three decades of expertise. In this 1972 publication (for which he is not given credit and which is republished a year later in an expanded version under his own name), he addresses the subject of draping the patient and writes, "[c]lothing can be distracting in a clinical photograph and often suggests a casual, nonprofessional uncovering of the anatomy" (Kodak 82). It seems fairly safe to assume that the circumlocution "casual, nonprofessional uncovering of the anatomy" refers to the issue of patient nudity and that it is the non-clinical associations the viewer probably has with nudity which worry the clinical photographer. This is reinforced by the bold type on the title page of the text which warns the casual reader that this is "FOR PROFESSIONAL USE ONLY."[4]

Nudity and its representation is, and has been, a problem in our culture and this was certainly true in the post-war period as is immediately evident in histories of censorship in the 1950s. Because clinical photography treads the dangerous territory of unclothed bodies, it is my contention that some calls for reform in the texts examined here are the result of a largely unspoken need to cultivate and establish a characteristic aesthetic which will distinguish it from other kinds of representations of the nude.

As noted though, this agenda is for the most part unvoiced and the issue of

[4] People whose parents were doctors have reported to me that clinical images in illustrated medical textbooks were regarded by children in the household with the same sort of guilty fascination as images in the National Geographic.

covering and uncovering the body, which one would assume is central to the business of medical photography, is not central to any of the texts under consideration. Returning to the list of desirable qualities in the ideal photograph above, there is evidence of some concern. If one reads the idea of "dress" broadly to include all kinds of bodily adornment then at least half of the desirable elements cited in the list above are concerned with dress and undress. Much of the concern with distracting elements could result from an anxiety that their inclusion might lead to a clinical image being associated, or even confused (though this seems unlikely) with images made in situations involving the "unprofessional uncovering" of the body. Elements such as nonstandard backgrounds (for example those with domestic furniture or wallpaper), street clothing, jewelry and so on, while they might not trigger the kind of Proustian unfolding of Barthes's piercing detail, all undermine the appearance of professional, and thus acceptable, uncovering of the body.

Consider the effect of jewelry. Discussions of Manet's Olympia often suggest that the depiction of her as undressed but still decorated (earrings, necklace and fancy slippers) was responsible for the general reading of the piece as erotic and for the resulting furor (Nead 16). In our culture, adornment, when combined with nudity, is widely associated with the erotic outside of art history as well. The category of adornment can be extended to include the shoes, stockings, makeup, elaborate coiffures and hats which are all stock "costumes" for actors and models in pornographic material. It does seem possible that the inclusion of such elements in a clinical image could result in readings of the image as having erotic and thus unprofessional overtones.[5] Perhaps it is this, rather

[5] I do not believe that most of the examples of "distracting" jewelry included really function in this way but it is possible. Among the striking images I have run across in other research is a photograph of a woman pulling down a lace chemise to reveal syphilitic chancres on her nipples which the caption tells us she believes to be the results of a lover's bites! (Journal of the American Medical Association 67 (1916): 1808). See figure 11. A popular example of clinical images with erotic overtones are Louis Sayre's experiments with the treatment of scoliosis using of plaster of Paris and a kind of tripod suspension device (Peres, Teplica and Burns 9).

than the possibility of a physician or researcher being simply distracted by these elements, which accounts for the emphasis placed on the elimination of the kind of details which refer to the outside life of the patient (jewelry, clothing, facial features) or the setting of the photograph, (furnishings, decor) as anything other than the contrived "no place" of the continuous sheet background which leaves the body of the patient almost floating in the image.[6]

Several decades after the publications of the texts considered above, the idea that the adoption of certain standards might assuage anxieties about patient nudity is overtly suggested in a special issue of the Journal of Biological Photography published in 1996. The subject of patient nudity was addressed in three articles: "Nudity in Clinical Photography: A Literature Review and the Quest for Standardization," "The Nude in Medical Photography: A Historical Perspective, with Modern Legal Ramifications," and "Guidelines for Inclusion of Psychologically Sensitive Anatomic Regions." In the first article the three authors, Michael Peres, David Teplica, and Stanley B. Burns, among other things, survey existing literature for guidelines on the subject of the management of patient nudity. Having considered these sources myself, I would concur with their conclusion that there is as "great deal of ambiguity in texts surveyed" (7). Authors do not agree with each other and sometimes even contradict themselves. Smialowski and Currie's suggestion that pubic binders be used is a statement which is by no means universally accepted, with Gibson and others suggesting that the offer of some kind of cover should not be made routinely because it might make the patient aware of a nudity not felt before (Gibson, Medical Photography 83) and thus more uncomfortable.

In response to the ambiguity in the texts surveyed and the variety of opinions in

[6] An interesting project, which historian Stanley Burns suggests ("The Nude" 22), would be to trace the increasingly depersonalized depiction of the patient in relation to changing ideas about the role of the patient in the medical encounter.

evidence as to how necessary complete nudity might be, the team does what our examination of the professional literature up to this point has led us to expect—they call for standardization. Their reasons for this are interesting. They claim that standardization is necessary because "variability in the way that nudity is handled can result in a patient's psychological discomfort, scrutiny from a wary public and legal community, and misinterpretation of visual information because of unnecessary or distracting [note the continued use of the term] image contents" (5). Unlike earlier authors, their reasons for these reforms are not strictly for the removal of distracting elements and the consequent improvement in the readability of the image. The patient's psychological comfort is now mentioned, but it is the need for standards upon which one can "base a defense against impropriety" (presumably the result of public or legal scrutiny) which overshadows both this and the traditional rationale of eliminating distracting elements (6). Although they do not use the term professional, this concern over intimations of impropriety echoes Gibson's concern over the suggestion of unprofessional uncovering of the body.

The three authors leave the presentation of their recommendations for new standards and guidelines until the last of the three essays, "Guidelines for Inclusion of Psychologically Sensitive Anatomic Regions," which David Teplica coauthors with Melany Bundy. However, explicitly and implicitly, in the two preceding articles, they seem to conclude that less is more—at least as far as patient clothing is concerned. In the first article they insist that one must "strip an image of unnecessary sociopolitical content" (4) and this seems to mean stripping the patient of clothing. Nudity is necessary and therefore normal in the physical exam, they argue, and the photographic process must be seen as a "direct extension" [their italics] of this interaction and thus also necessary

and normal. Stanley Burns valorizes the photograph of the naked subject as particularly useful in the second article, where he notes in the captions of seven of the twelve clinical and anthropological images he presents that "only a full body nude photograph can truly depict the ravages of depigmentary disease" (17), "show the total devastation of this disease" (20), "correctly access the disease" (21), "truely [sic] demonstrate the effect of the lesion and its cure" (23), or "correctly and appropriately show the nature of this condition" (24). Burns's position is obviously informed by the pleasure and interest he (and others, including myself) take in archival clinical nude images, but, more significantly, he is also influenced by his experience sitting on an ethics board which sees cases where well-meaning physicians have made full-body nude studies of young patients and then faced allegations of child abuse or pornography.

Teplica and Bundy's general position in the third article is that "[t]here is no place for jewelry, clothing, or body adornments in a scientific or medical image, and any such article in the primary or reference zones should be removed" (28). The rationale for this is that "[s]cientific images record anatomy. Jewelry, clothing and adornments are not anatomy" (28). They then return to the older justification for this, stating that, "[t]hey confuse the record by including a great deal of extraneous and distracting information" (28). Additionally, in their guidelines they make appeals to "science" as a means for establishing a credible foundation for the nude image (27), as a rationale for the clinical decision to include a given body part in an image (28), and as a reason why one should not be restrained by "polite" social concerns over "decency" [their emphasis] (28). As in the previous articles, their purpose in presenting these guidelines is to "maximize patient comfort, minimize legal concerns, and promote standardization" (27).

Clearly their recommendations do not represent a change in direction in the

practices associated with the pursuit of the good or ideal clinical image—only the discourses around them and reasons given for them. What was removed before because it might be "distracting" is now also removed for these new reasons. It does, however, seem ironic to me that in order to minimize legal concerns and to reduce patients' psychological discomfort they recommend that clothing in the zone to be photographed and in adjacent zones be removed on all occasions. While the resulting image may look more neutral and thus assuage concerns about "improper uncovering" I am uncertain that a regime of more complete undress would actually feel more neutral to the subject in question. Although we are told that "[i]n the collective experience of the three authors of this review,[7] not a single patient in thousands who were sensitively photographed, voiced any concern whatsoever, when asked to disrobe for a photograph that included psychologically sensitive anatomic regions as the primary or adjacent anatomic zones" (7), it is generally acknowledged in the literature which I, and they, have reviewed that patients are decidedly not always nonchalant about this prospect.

Apropos of this, I would like to note that the literature survey conducted during Peres, Teplica and Burns's "quest for standardization" is not as comprehensive as it could be[8] and although they are not making recommendations at this point as to exactly what procedures might be recommended for the new standardized approach, they are already intimating that more extensive exposure of patients is justified and desirable. In the case of their review of Smialowski and Currie they note the team's recommendation that "pubic binders may be used" on page 140 but fail to note, two pages later, the

[7] They are, respectively, an instructor of medical photography, a medical doctor with a master of fine arts degree and an opthamologist/historian.

[8] Peres, Burns and Teplica ambitiously take on more issues than they can hope to do justice to in their ten pages. These include the appropriation of medical images by contemporary artists, the historic incidence of the nude in medical photography, the means of assuring the anonymity of beautiful or voluptuous women in historical images, the destruction of W. H. Sheldon's nude photographs of Ivy League freshman, definitions of pornography and the question of authorial intent.

authors' stronger statement that breast and pubic regions "should be covered in every case unless otherwise directed (142). They quote approvingly and extensively from another author (Sadler 1948) who writes that "[a] good rule to follow is for face, head or neck, strip the patient to the waist or sometimes in the case of women, all clothing should be removed, but the pubic region may be draped if not essential to the picture" while omitting the opinions of a number of other authors.[9] Furthermore, although they claim that there are no suggestions for the practical management of the unclothed patient in Medical Photography in Practice, edited by Linssen, in fact this is dealt with in the sections on photography in paediatrics and orthopaedic surgery and in the section on photography of the patient (Evatt 197, Whitley 234, Engel 74).

To return to the question of how comfortable patients are with the prospect of nudity, in these same texts we are told that patients may need reassurance (Engel 78), tend to be apprehensive (Engel 76) and that "sometimes it is more expedient for technical or psychological reasons to cover up rather than remove a shirt or blouse" (Engel 74). With reference to older school age children we are told that they may be embarrassed or apprehensive and that if this cannot be dispelled by the tactful photographer "it is preferable to forgo the photograph than to create an unfortunate impression on the child's mind" (Evatt 197). The author recognizes that the prospect of a nude photograph may be alarming (197) and that although no clothing ought to be visible in the finished print it is desirable to retain as much clothing as possible (Evatt 198). The author of the orthopaedic section also notes that the personal feelings of the patient will probably consist of some mixture of fear, embarrassment and resentment (Whitley 234).

From these descriptions of patient sentiments it is difficult to see how Teplica

[9] The asymmetry in procedures for men and women gives one pause. No reason is given for this. Attempting to give the author the benefit of the doubt, I can only guess that his assumption that women wear dresses which are difficult to remove by halves is the motivation for this?

and the others' call for more complete disrobing and more consistent use of nudity in clinical images might lead to their desired result of reduced patient discomfort. It might allay some uncertainty in that, where, before, patients might be in some doubt as to whether or not he or she would be asked to disrobe, they are now assured that they will be. This seems cold comfort. I do hasten to add at this point that I do not doubt the good intentions of Teplica and the others. Some of their suggestions including the offer of a chaperone, the provision of privacy during the process, and the exclusion of the patient's face from the image where it is not relevant (27, 28) are all consistent with reducing patient discomfort and preserving patient dignity. However, the recommendation that the decision to incorporate a given body part in the image "should be based purely upon the clinical question at hand and the anatomy of the situation" because "[r]eligious issues, emotions, politics, and comfort have nothing to do with scientific or medical concerns" (28) strikes me as inflexible and not sensitive to the feelings of the patient. We are told that "[t]hese are factors the patient must consider when deciding whether or not to consent to the session" (27) and that they are therefore not the photographer's concern. However, putting the onus on a patient who is often ill and in a relatively powerless position is not entirely responsible. This is particularly the case in the situation they outline where consent is obtained beforehand (27), and where "no verbal affirmation should be given to the 'awkward' nature of the photographic experience" (28) during the procedure in an environment where scientific concerns take precedence over those of politeness or decency.

Having rejected the possibility that the aesthetic reforms called for in the textbooks listed above were strictly necessary, across the board, for improved legibility, I have outlined the probability that, because they were frequently called upon to depict

people in various states of undress in a culture which had strong taboos about nudity, clinical photographers, as a group, sought the reassurance of standard procedures and a professional aesthetic. However, just as I doubt the potential for distracting elements to seriously impede the function of the clinical photograph in its use by a physician or researcher, I am also skeptical about recent claims that the elimination of the patient's clothing really decreases his or her psychological discomfort.

This is not to suggest that the cultivation of a professional aesthetic through the elimination of detail is "merely" aesthetic and serves no function. It is simply that the elimination of detail does not necessarily serve the functions which authors of texts on clinical photography suggest. The function which Peres, Teplica and Bundy attribute correctly to the changes they propose is the minimization of legal concerns due to the scrutiny of a wary public and legal profession. A professional aesthetic, rigidly adhered to leads to the inclusion of no distracting details which might have a "disturbing" effect (Hund 17). The elimination of all adornment, particularly shoes, jewelry and underclothes, also mitigates against the reading of the image as erotic. This employment of the elements which constitute the professional aesthetic protects against the appearance of impropriety. Furthermore, by standardizing the encounter perhaps the practitioner might define the resulting image as a neutral and objective scientific representation. The benefits of these functions however, accrue to the photographer, not the patient. In my estimation the emphasis in earlier texts on accommodating the disposition of individual patients when making decisions about the exclusion of detail (particularly clothing or other covering) is more sensitive to the needs of the patient and his or her comfort or well-being.

However, if the reforms called for do not necessarily improve either the legibility

of the image or patient dignity, the question arises as to why they were considered so desirable across the new profession as a whole? Even in the case where they seem functional in terms of averting possible eroticized readings, one wonders why it was this particular set of reforms which were promoted and adopted. Because it is now the norm, nudity seems like the obvious answer, but this does not strike me as the only obvious answer to the problem of achieving a standardized, professional image. Standardization, and the concomitant appearance of professionalism and propriety, could just as easily be achieved through a conservative approach which involved draping the patient, as through complete nudity. Furthermore, if, as I have proposed, concerns about propriety were a driving force behind the adoption of these reforms, such questions could be solved by the standard inclusion of a chaperone in the photo studio.

I feel that the answer to the question of "why these reforms?" can be found by looking at contemporary aesthetic projects in America and Great Britain in the post-war period—specifically, modernist design and the discursive relationships it has to ideas of science, progress and rationality. The desire to eliminate ornament or decoration and to strip down the object to a kind of essential form, which is evident in the proposed reforms to clinical photography, has a clear resonance in discourses of what constituted modern design.

Although it is impossible to succinctly define a movement which was by no means unified and stretched across a number of decades and countries, design historians have identified characteristic features and defining moments in modernism. In what follows below I will briefly trace temporal and stylistic coincidences between modernist design and clinical photography, which I contend did not develop in a vacuum and was affected by trends in the larger visual culture. The popularity and widespread application

of modern design tendencies is documented in many books and exhibition catalogues. Although there were other design tendencies which enjoyed popularity in the period, it is safe to assert that modernist design, if not the only dominant aesthetic, was sufficiently widespread to support the thesis that it might have been influential in visual culture outside of the well-documented areas of architecture, home furnishings, and household objects. Taking into account Paul Greenlaugh's unequivocal statement that, at least in terms of quantity, modernism has been "the most successful look ever" (4), we can imagine that the authors of prescriptive books and articles on clinical photography were surrounded by buildings and objects which had the same kind of aesthetic qualities they were promoting for the ideal clinical image (figure 12).

In America, the Museum of Modern Art (MOMA), established in 1929, served as an arbiter of modern design through a series of exhibitions and publications. Curator Philip Johnson's description of the maturation of modernism from a pioneering phase into "International Style" in the 1930s has been widely accepted in histories of the movement. Elsewhere 1935 is described as a "convenient starting point" (Eidelberg 22). In terms of periodization, this widely accepted foundational moment in modernist design coincides with the appearance of the first periodicals concerned with clinical photography and the first prescriptive text (Kodak's 1932 pamphlet).

The modernist aesthetic was based in principles of utility, simplicity, the avoidance of applied decoration, and the use of new materials and new means of construction (Eidelberg 22, 23) In a slightly different iteration, in describing International Style in the introduction to Modernism in Design , Paul Greenlaugh defines its hallmarks as abstraction (pure form), internationalism or universality, and technology (mass production). These coincide with calls for new procedures in clinical photography which

would result in images free from distracting details (pure), and specific local or temporal references (universal), in a standardized setting that allowed for infinitely reproducible for follow-up series using new photographic technologies.

Just as I am arguing that the aesthetic maneuvers called for in texts on clinical photography had their origins in the larger culture, neither were the principles of modernism merely a matter of aesthetics. According to Paul Johnson, author of "The Age of the Giant State," the shift in taste from earlier design tendencies to modernism between 1925 and 1935 had a basis in socioeconomic issues, such as the Great Depression, while, later on, "wartime conditions and the continuing postwar shortages influenced design by enforcing simplicity and economy of materials" (Johnson 19). Not limited to the immediate postwar years, modernism remained influential well into the 1950s and 1960s (Marcus, Design in the Fifties: When Everyone Went Modern; Marcus, Functionalist Design 10; Johnson 19), the period which saw a boom in prescriptive texts in the field of clinical photography.

Another way of reading these stylistic tendencies is through discourses of functionalism (Functionalist Design 9). Central to functionalism are the modernist notions that "objects made to be used should be simple, honest and direct, well-adapted to their purpose; bare of ornament; standardized, man-made, and reasonably priced; and expressive of their own structure and materials" (Marcus, Functionalist Design 9). Here, we see again the kind of aesthetic reforms called for in prescriptive texts on the ideal clinical photograph paralleled in the larger visual culture. Within the discourses associated with functionalist design, however, is the idea that these reforms, like those in clinical photography, were not merely aesthetic and would serve some purpose or function. Authors promoting modern design often appealed to its simplicity and rationality and

this "look" which relied on unornamented, timeless, standardized objects free from extraneous detail, was additionally associated with "speed, efficiency & progress" (Braden 56) as well as discourses of cleanliness, hygiene (Marcus, Functionalist Design 98)—all things with which any emerging professional group would be pleased to identify itself! The fact that these aesthetics were imbricated with the same rhetoric of progress which informed contemporary medicine would have made them that much more attractive to clinical photographers who would be deeply invested in and most eager to live up to the standards of scientific medicine.

The association of modernist aesthetics with speed and progress further finds expression in a style known as Streamlining which focussed on and amplified these characteristics. Initially a description of a scientific principle, streamlining was transformed into "a design idiom that was applied to virtually any object" (Weingartner 7). Martin Eidelberg, editor of Design 1935-1965: What Modern Was, writes that "the main driving force behind Streamlining was the desire to create a style... associated with movement science and technology" (75) with the effect that even "today Streamlined objects convey the same wonderful aura of technology and science... that they evoked over half a century ago" (75). As a style it involved "the reduction of physical and 'visual' weight, the enclosing of mechanical parts, the elimination of extraneous details, & the merging of forms as well as the use of transitional curves" (Braden 56 emphasis mine). The similarity between these calls for the elimination of "extraneous detail" and for the elimination of "distracting details" in clinical photographs around the same time is obvious. The phrase appears in a number of texts including Bush's The Streamlined Decade (1975), Kline's The Aesthetics of Progress (1984), Weingartner's Streamlining America (1986).

However, although Streamlining was influential in reinforcing the ideological links between elements of modern aesthetics and discourses of hygiene, science and progress, it should be made clear that "[d]espite our tendency today to view International Style and Streamlining as compatible aspects of a single Modernist movement, the two were quite distinct and in fact, often opposed" (Eidelberg 74). While some designers argued for functionality of Streamlining[10] (Eidelberg 77) and individual elements of it could be found in the canon of International Style (Eidelberg 72), "to modernists who promoted International Style and the Bauhaus, Streamlining was anathema" (Eidelberg 74). It has been noted that "Streamlining was nearly a four letter word around 1940 at least in some circles" such as the MOMA. Eidelberg explains that "[a]t the heart of the matter was the unspoken issue of applied ornament. In essence, Streamlining was an imposed style. It did not result from the object's function or its various parts; quite the contrary it was... heresy of heresies—ornament" (Eidelberg 75). However, despite the fact that streamlining did not actually embody the principles of modernism, the ornamentation it applied did draw on the some of the same discourses as international style or functionalism, and streamlined objects certainly formed part of the cultural landscape of the mid-twentieth century.

Perhaps it is not surprising that modernist aesthetics (either in their pure form or the derivative style of streamlining) were reflected by clinical photographers who wished to produce a more functional, more professional-looking product. However, what interests me most in the accounts of streamlining and functionalist design is the discordance between the appearance of functionality and actual improvement in function. As I have noted above in relation to clinical photos, the appearance of increased functionality is not always concordant with an improvement in function. Just as the

[10] Designer Kem Weber and others noted that it accumulate less dust! (Eidelberg 77)

excision of all elements labeled "distracting" does not necessary guarantee a more functional clinical image, the "streamlining" of a toaster or a butter dish does not result in a better breakfast (figure 13). It is telling that one author suggests that the function of streamlining was to give the impression of speed and efficiency (Braden 56), rather than to produce a faster, more efficient product. Functionalists rejected Streamlining "because they felt that there was no 'efficiency' in making a stationary object conform to the laws of aerodynamics" (Eidelberg 75), but functionalism itself has been subsequently subjected to similar criticisms. Marcus quotes postmodern theorists who point out that functionalist architecture (the starting point for functionalist aesthetics) was more symbolic than functional. It was, they claim, "symbolically functional. It represented function more than it worked functionally" (Marcus, Functionalist Design 14). This brings me to my final point.

It is clear that the reforms in the visual vocabulary of clinical photographs, which echoed elements of modernist aesthetics, were not a stylistic maneuver entirely without results. Although I question the rationale given for the elimination of distracting elements in clinical images, I am not questioning the fact that the cultivation of a professional "look," which was the primary result of these reforms, was profitable to the development of the field of clinical photography. Despite my suggestion that not all recommendations for reform (such as the elimination of jewelry) resulted in images which were actually more functional (more legible/less distracting), I believe that the adoption of this particular "look" did have important symbolic functions. It is quite possible that the symbolic functioning of this aesthetic was as important as any actual improved functioning which authors suggested would be the results of their reforms. If, through the visual vocabulary of modernist aesthetics, the clinical images gained access to traits associated with it, such

as order, rationality and science, which changed the way these photographs were read, then one could say that the adoption of this particular aesthetic had real results.

The one example of this which we have already seen is the choice of particular approaches to the management of patient nudity which emphasized a clean, minimalist style of picturing the body. Because it resonated with contemporary aesthetic trends, this approach functioned symbolically to emphasize ties to hygiene, science and objectivity, in a way which a more Victorian approach relying on drapery and chaperones probably would not. These new symbolic ties to science and reason could be seen as the major way which clinical photographers negotiated the sometimes uncomfortable issue of patient nudity—an interesting observation if one considers that the methods involved in the pursuit of this aesthetic actually resulted in an increase in nudity.

Perhaps most importantly, however, were the ways in which this aesthetic functioned symbolically in relation to the profession as a whole. In additions to solving practical problems such as the appearance of impropriety, connections to desirable traits embodied in modernist aesthetics such as efficiency, hygiene, cleanliness, and better living through science and technology would also have been symbolically functional in consolidating the position of a new profession in clinical settings. The benefits of professionalization are many, from the tangible, such as greater access to resources, to the more intangible, such as status and respect. During a period when popular faith in the promises of hygiene, science and medical technology were at their height, the employment of an aesthetic strongly associated with these traits had very real results in terms of establishing medical photography as a professional, objective and scientific practice.

Chapter Seven: Defining Difference: The Case of W. H. Sheldon

The preceding chapters of this project have all been devoted to mapping the theoretical, historical and methodological terrain of the study of clinical photographs. Scholars from a number of disciplines have voiced their hopes for the future study of science and photography in culture, the possibility of disrupting of dominant discourses through representational practices, and the potential for photographs to be a primary source in historical study. Some have even suggested that an interdisciplinary method, drawing on the field of fine arts, might be one of the most fruitful ways to approach the study of archival clinical images (Jordanova; Apple; Worden). How could one resist such a direct invitation?

Keeping in mind both the aspirations and experiences of other scholars, this chapter is devoted to an examination of a single body of archival images as a kind of testing ground for ideas raised in previous chapters. Primarily it is a case study of the central problem of this thesis—the study of how photography has been used in conjunction with science to tell the truth about ourselves and others.

The key figure in this chapter is American researcher and medical doctor William H. Sheldon (1898-1977), who sought to establish the field of "biological humanics" or "biologically oriented psychology." His central thesis was that human behaviour is a function of structure, and thus knowable though the examination of the body. In other words, he believed that by measuring the body, particularly with the aid of photography, one could determine character. In fact, the extravagant claims he makes for the photographic process he developed were what first attracted my attention, along with his

extensively illustrated publications.

Sheldon is a particularly attractive figure for the purposes of this study on a number of levels. Most importantly, his research illustrates some of the tendencies addressed by the feminist critics of science in chapter one, and theorists of photography in chapter two. First there is the propensity for stereotypes circulating in the culture to find their way into a researcher's choice of subject, experimental design and terminology. Secondly there is the potential for the "objective" results of the project to crystallize these stereotypes as scientific fact, thus reinforcing their truth value in the larger culture. Third is a reliance on extensive photographic documentation as evidence or proof. All of these will be further addressed below.

Before examining the specifics of his project however, it is important to establish that Sheldon was not an outsider in the scientific world of his times. While examining a project that was on the fringes in terms of scientific credibility might be interesting—above all for what it might reflect about parent culture—it would be difficult to argue that a project judged to be pseudoscience had any significant influence on common sense or received beliefs. In Sheldon's case, however, the scale and longevity of his project, the wide circulation of his works, and his academic and professional credentials all suggest that his work was accepted within the scientific culture of his time.

Between 1927 and 1975 Sheldon published a number of articles and a series of books, all dealing with his central thesis of a connection between body type and psychological characteristics. In fact, the project outlived its author in that, in 1982, five years after Sheldon's death, his colleagues published a thirty-year follow up study of one of his earlier books. His work is cited in texts on mental health and hygiene and in introductory psychology textbooks well into the 1970s and his influence was not limited

to the field of psychology. Multiple copies of his texts have been part of the collections of the medical, medical history, education, physical education, theological college and main libraries in Montreal universities, in English and in translation, suggesting that his work was widely disseminated in a number of disciplines.[1]

Furthermore, Sheldon certainly was not on the fringes of the academic community at the height of his career in the 1940s and 50s—even if he did sometimes position himself as an eccentric outsider (more about this later). A medical doctor and a Ph.D. in psychology, he was on the faculty at Harvard, Columbia, the University of Wisconsin, the University of Chicago, and the University of Oregon in medicine and psychology. He founded the Institute of Human Variation at Columbia and Oregon which was funded by the Rockefellar Foundation (Atlas xv). In the preface to the Atlas of Men, the final text in his Human Constitution Series, Sheldon thanks the medical directors and staff of twenty-six hospitals, and the "co-operating directors of student health, and particularly to the faculties of physical education in 31 colleges and universities where students were photographed, to many officers, personnel directors and other representatives of co-operating military, civilian and industrial organizations" (Atlas xv). Clearly he was able to garner help and support for his project from influential people in a number of institutions and geographical areas. To give a further idea of the scale of this project, in the introduction to the Atlas of Men, he thanks the 46 000 men who have been photographed as part of the project.

The reader may even already be familiar with Sheldon's project, without knowing it, in one of two ways. One would be through having encountered the terms endomorphy, mesomorphy and ectomorphy, describing the three major body types, in physical education or psychology classes (figure 14). Very roughly speaking these are,

[1] Concordia, McGill, Université de Québec à Montreal and Université de Montréal all have copies.

respectively, a tendency towards fat, muscle or thinness.[2] The second way would be because of Sheldon's posthumous moment in the limelight in 1995 when the New York Times reported that a cache of photographs he had taken of naked Ivy League undergraduates had been discovered (Rosenbaum). The only reason this story was of such interest is that many now-prominent americans were among the subjects. Hilary Rodham Clinton and George Bush Senior are among those frequently mentioned.[3]

These photographs were part of Sheldon's life-long project, which is most completely described in the four books he published between 1940 and 1954 as the Human Constitution series. They include Varieties of Human Physique: An Introduction to Constitutional Psychology (1940), Varieties of Temperament: A Psychology of Constitutional Differences (1942), Varieties of Delinquent Youth (1949) and Atlas of Men: A Guide for Somatotyping the Adult Male at All Ages (1954). The identification of these texts as central is supported by the fact that the whole series was republished in 1970.

Sheldon overtly positions these four books as outlining the fundamentals of biological humanics or constitutional psychology. Varieties of Human Physique (VHP) explains the somatotyping process whereby bodies are measured for their tendencies towards endo-, meso- and ectomorphy (18). It is the companion work to Varieties of Temperament (VT) which discusses three analogous tendencies in terms of character: viscerotonia (sociability and love of comfort), somatotonia (aggression and a desire for physical action), cerebrotonia (extreme sensitivity and solitariness). His main goals in

[2] As a child in the late 1970s in Ontario I can remember that, upon learning the terms in a health class, I was distinctly worried that I might be doomed to endomorphy.

[3] Certainly the appearance of a similar collection of photos taken around the same time at the Charles Hayden Goodwill Inn which served as the basis for Sheldon's Varieties of Delinquent Youth would not have had the same impact.

these two texts are to explain his systems of measuring physique and temperament and to establish that, unlike many previous physiognomy projects, he has established a correlation between the two. He argues that he has established a correlation between endomorphy and viscerotonia, mesomorphy and somatotonia, and ectomorphy and cerebrotonia, such that individuals displaying a somatotype or body type in which one of these physical tendencies is dominant tend also to display aspects of the analogous temperamental tendencies.

Varieties of Delinquent Youth (VDY) (the text for which the thirty year follow-up was published) is an experiment in the use of Sheldon's procedures. Here he brings together the measurements of physique and character in a clinical setting, to prove the usefulness of somatotyping as a diagnostic or therapeutic tool in addressing the individual and social problem of delinquency. The remaining text, the impressive, large format, Atlas of Men, represents Sheldon's final major effort to popularize his terminology and procedures as standard research tools. In some ways it is designed to stand alone as a kind of introductory textbook. In it he summarizes the findings of the three previous volumes and devotes considerable space to a discussion of the learning of the somatotyping process. He also suggests the fields of study which might profitably adopt somatotyping and the outlines the positive results that this might have in terms of individual physical and psychological health, the advancement of science and medicine, and the amelioration of social problems.

Taking these four texts as the main vehicle for the study of Sheldon's photographically based project either solves or, at least sidesteps, many of the problems relating to the use of photographs as source documents raised in chapter four. Problems concerning the slipperiness of photographic meaning due to lack of context or evidence of

authorial intent, do not arise because of Sheldon's zeal to communicate his procedures and philosophy. His writings explain his understanding of photography, his definition of objectivity and the effects he expects (or hopes) his research will have on society in general.

A final reason for choosing Sheldon as the primary case study is that his life's work provides a direct connection between the earliest proponents of the idea of the legible body and the modern era. In Varieties of Human Physique he positions his project as a continuation of not only nineteenth century physiognomy, but of a chain of inquiry leading back to Hippocrates and Aristotle (Physique 22, Temperament 109). The second chapter of VHP is devoted to outlining the various systems suggested by his predecessors and provides a chart outlining the terminology used by the thirty best known figures in the field, eighteen of which are from the early twentieth century (Physique 22). Noting that "[a]lmost every conceivable variable has been seized upon - from the shape of the brow to the position of the stars" (Temperament 109), he continues, saying diplomatically that although these are not "useless for all purposes [...] by and large they failed to provide the key to system and order in the study of human beings" (Temperament 110). Thus, while rejecting the most bizarre iterations of the search for this key, Sheldon sees his predecessors' studies as flawed approaches to a potentially fruitful field of inquiry.

Briefly, according to Sheldon, his work differs from earlier efforts and provides a means of overcoming the problems inherent in them by rejecting the idea that an individual must belong to a single type. That is to say, that using previous systems one either was a digestive type or a muscular type, a hypervegetative or hypovegetative type, a phlegmatic or athletic type, and ernahrungstypus or a krafttypus type, and so on

(Physique 22). Clearly, problems arose in trying to fit all humans into two (or sometimes three) categories. Sheldon overcomes this by declaring that all humans display characteristics of the three types he identifies, but in varying degrees. He writes that the concept of fixed types "like the poles supporting a clothesline [...] provides only end suspensions for distributive classifications" (Physique 27). This means that, in Sheldon's system, rather than being an endo-, meso- or ectomorph, all subjects display all three traits to varying degrees.

If Sheldon was indeed, as he believed, successful in finding the key to the connection between physique and temperament, he would, through this work, provide a kind of retroactive legitimation for previous projects which sought to read interior traits from the body. It would mean that although Lombroso, Viola, Bertillon, Deschenes, Charcot, Diamond, Crichton-Browne, Galton, Agassiz, Hirschfeld, Munby, Kretschmer and many, many others, were finally mistaken in the physical variables they were attempting to correlate with criminality, degeneracy, homosexuality, alcoholism, hysteria, insanity, or racial inferiority, the basic premise that such a thing was possible would be vindicated.

In championing his "radical premise" that behaviour is a function of structure, Sheldon is the last great proponent of the project of the legible body. The following is an examination of what Sheldon read from his subjects' bodies in the photographs he made, and a consideration of how the themes that he found there reflect the concerns of his time.

The most immediately striking aspect of Sheldon's work is the photographs. The most extensively illustrated text, the Atlas, features pages upon pages of photographs of naked men. Following the trajectory of the professionalization of the clinical image outlined in chapter six, as the series continues, the photographic technique improves. In

the final publication, The Atlas of Men, many of the distracting elements in the first book (such as variable backgrounds, poor distinction between figure and ground, uneven lighting, and looming ghostly shadows seen in figure 16) have been eliminated. It appears, however, that, rather than controlling the backgrounds as suggested in contemporary manuals of clinical photography, they have simply been removed from the image in the darkroom. This would have had the advantage that earlier "flawed" images could be included in the 46 000 plus archive.

Each subject was photographed standing on a pedestal which could be rotated so that images could be taken from the front, back and in profile. However, while the reader is invited to examine these images, the men in the photographs do not in any way return that gaze. All the faces, along with the genitals, have been obscured, the unavoidable result, Sheldon tells us, of the terms under which many of the photographs were taken (Atlas xv). Regretting this necessity (Atlas 33), as he often refers to both facial and genital features in his analyses, Sheldon assures the reader that "among the portraits to be encountered on the plates of the Atlas of Men are men of distinction" coyly adding that "eminent professors are there, philosophers and doctors, a sprinkling of really top flight athletes, a constitutional psychologist, two or three murderers and one of the most accomplished check forgers in the country" (Atlas xv).

Here we see the second striking aspect of Sheldon's series—his casual, personal, idiosyncratic writing style. Given to lists and catalogues such as the one above, reminiscence, sweeping generalization, strange little jokes and scathing criticism of certain disciplines and professions (including his own), his revelation that one of the faceless

figures in the Atlas is the author, is perfectly in keeping with his overall approach.[4] It has been suggested that Sheldon himself was a 3.5-3.5-4 (probably a dog according to his animal totems). Figure 15 reproduces a page from the Atlas that could well include this image of the author.

Sheldon himself acknowledges the anecdotal aspect of his project, noting the pleasures inherent in it, saying in Varieties of Delinquent Youth that:

> Occasionally a bit of sociological speculation may have crept in. I find too that after a man has successfully emerged from the age of venery a still more exciting pitfall with even greater consequences lurks in his path. This is the call to preach. It is better than the sexual orgasm because it leaves the whole personality—not just a part of it—in triumphant relaxation [...] this may be why those who have once tasted the joys of college lecturing or psychoanalyzing people find it so hard to go to work. (111)

Although significant portions of his text are given over to statistical analysis or methodology, considerable space is devoted to "preaching," speculation and whimsy. To choose an example of this last tendency, he frequently refers to jocularly to God as Mr. G., Mr. Zeus, The Potter, Mr. Benevolent Omnipotent, Omniscience, or Mr. BOO. Santa Claus, meanwhile is Dr. Benevolent Polypotent Pluriscience (Delinquent Youth).

Because of this aspect of Sheldon's work, one cannot help but form a striking image of him as he sees himself—a visionary, an iconoclast, a reformer, and a man of science with great love for the natural world and exceptionally clear insight into the nature of his fellow beings, who will not shy away from saying difficult or unpopular things if

[4] He provides the reader with anecdotes about his childhood, how-to tips on conducting amateur somatotype research on the New York Subway, and his vision of biological humanics as the next religion which will replace the outmoded and "conceptually too splendid theological 7-7-7'ism" of Christianity (Delinquent Youth 91), telling the reader that, "the immediate problem in biological humanics is to ferry the religious mind across the fatal quagmire of theology (Delinquent Youth 846).

he believes them to be true. The further result of this tendency is that one is faced with an embarrassment of riches in terms of possible themes to be examined in the Human Constitution Series. Sexuality and sexual identity, gender identity, gender relations, racial difference (including differences between the so-called "white races"), the history of psychology, the evolution of the human species and eugenics, uncontrolled reproduction, the use of intelligence testing, education and vocational counseling, social work, the relative influence of heredity and environment, predisposition to disease or alcoholism, and the driving forces behind war and social change are dealt with frequently in the series. Of these themes, only one has been dealt with extensively and that is in Stephen Gatlin's doctoral thesis, which compares Sheldon's discussions of eugenics with contemporary Nazi discourses noting that they share the same value base.[5]

While eugenics is one of the "difficult" topics which Sheldon broaches, in terms of implementation it is always one which remains somehow vaguely in the future. He certainly sounds the alarm, saying that it is vital that we consider the question of the quality of human stock. However, there is little in terms of concrete plans or suggestions. Even when he does suggest eugenic measures it is in what, one presumes, he sees as more palatable terms, that is as positive rather than negative eugenics. In the first text in the series, Varieties of Human Physique, published in 1940, Sheldon says:

> [...] for a long time now there has been talk a eugenics program, but it seems possible that we have hitherto attacked the problem from the wrong end. We have talked only in terms of suppressing the unfit and of eliminating or sterilizing a fringe of unfortunate. But for many reasons it does not seem wise to subject an unhappy minority to harsh treatment.

[5] While Sheldon may employ a modernist aesthetic (as I have discussed in chapter six), Gaitlin sees Sheldon's advocacy of eugenics as a means of defending traditional values in the face of modernism.

> [...] May it not be more desirable to tackle the problems at the other end and to discover what parentage produces the best children? It is still difficult to agree on what we shall mean by "best," yet not so difficult or so dangerous as to decide what is meant by "worst." (229-30)[6]

Neither does he relinquish this plan in the subsequent text, Varieties of Human Temperament (1942), where he states that "it might also be possible by discriminate breeding to strengthen the mental and spiritual fiber of the race" (437) as well as eliminating physical illnesses such as cancer and tuberculosis. He does, however, recognize that "these are remote optimisms, not immediate ones" (Temperament 437).

One might imagine that, following the revelation of the extent of the Nazi program of racial hygiene at the end of the second world war, that Sheldon might abandon these remote optimisms and, to a certain extent, he seems to do so. Now he speaks more indirectly of "our most deadly enemy—careless reproduction" (Delinquent Youth 1), and it is biologically oriented psychology which will "prevent us from falling over the brink into human chaos and social psychosis" (Delinquent Youth 1). The final publication, the Atlas, is surprisingly prescient, predicting, correctly, that genetics will be field where questions of heritable traits will be answered, while also suggesting, incorrectly, that somatotyping will provide the starting point for this project (xiv).[7]

As Gaitlin identified, it is in relation to parallel Nazi discourses that Sheldon's eugenic musings are particularly striking. Unfortunately, sources outside of his Human Constitution series show that not only did Sheldon draw upon the same discourses as the

[6] He adds that men "remain squeamish at the thought of judging the degree to which they themselves are thoroughbreds. Perhaps a certain wisdom resides in such squeamishness, for there has never been a clear statement of the criteria by which human texture can be gauged" (Physique 76).

[7] He also devotes much of the introduction of the Atlas to the discussion of the tendency of Americans as a people to be overweight, even outlining a then-popular high protein weight-loss diet such as those recently popular in North America (20).

Nazis, he also held strong anti-Semitic views, at least in his later years (Sample). In terms of understanding Sheldon, there is only really one other major source than his own writings. Jim and Tyra Arraj, admirers and promoters of Sheldon and his work, keep a website entitled Inner Explorations with links to their book, Tracking the Elusive Human, lionizing accounts of Sheldon's work, and the transcript of their video, William Sheldon: A Forgotten Giant of American Psychology. Despite clearly being a great fans of Sheldon, the Arrajs still reprint John Sample's account of meeting with a Sheldon in the 1960s who had, as they put it, "wandered off [...] into a bitter fog of prejudices which may have gotten worse as he got older" (Arraj, Introduction). In fact, as part of their effort to recuperate Sheldon as a great man, the Arrajs hypothesize that there were in fact two Sheldons: the first the brilliant visionary who was responsible for the development of constitutional psychology, the second a brittle, inflexible man who took pleasure in needling others with his too sharp wit and to whom they can attribute Sheldon's less desirable traits. The Arrajs, who are also great admirers of Jung, elsewhere refer to the two Sheldons as "the Sheldon who found that something deeper down and laid the firm foundation for the scientific study of physique and temperament, and then the Sheldon who in the grip of his feelings, which often opposed his thinking, worked unconsciously to obscure the magnificent work he had created" (Tracking the Elusive Human).

At any rate, although this second source is interesting, filling in some biographical detail, such as the fact that he was married at least twice, noting connections to other famous individuals, particularly a friendship with Aldous Huxley (another proponent of eugenics), and the popularity of somatotyping, as shown by Huxley's article on Sheldon for Harper's Magazine in 1944, beyond the revelation of Sheldon's anti-Semitism it does not greatly alter the reading of Sheldon gleaned from the Human Constitution Series.

This is not to suggest that there are no hints of this unfortunate tendency in the series, rather, it does not particularly stand out, given the historical period and his willingness to evaluate stereotypes for any concordance with his own observations, because such stereotypes could reflect both "the accumulated wisdom of the ages and the superstitions of ignorance" (Temperament 1). As such, his observations on Jewish subjects and Jews in general, although sometimes outrageous, are no more so than his discussions of the Irish, African Americans, or homosexuals.

Finally, in relation to Sheldon's eugenic leanings, while he was willing to speculate about the potential improvement of the human race, in the Human Constitution Series at least, Sheldon seems to be much more invested in the task at hand—the essential first step of establishing a means of measuring and evaluating individual specimens. While certainly he rates some types as being more successful than others, his somatotyping system is very complex, there are many, many types, and there is certainly no one to one correlation between type and race.[8] Although he points to the possible utility of his data and methods to the medicine, genetics, psychology or sociology of the future, his central concerns are the gathering of that data and the development of those methods, not the breeding of better humans. It is through Sheldon's present practice, rather than his reflections on its future uses, that what I see as the over-arching theme in the Human Constitution Series emerges, that is the definition and measurement of masculinity. In fact, the measure of masculinity could be seen as one of the iterations of Sheldon's eugenic tendencies, with speculations centering around the male of the species rather than humans in general.

As previously noted, much of Sheldon's early work was carried out during World

[8] As an example of the strange relationship between somatotype and stereotype, in one case he writes that an individual would be the perfect example of the stereotype of the aggressive Jew, only he is not Jewish.

War II. This influenced his project on a practical level, in that he gained access to large numbers of research subjects through co-operating military organizations, and used military hierarchy as a model by which he could classify the subjects of later studies (Delinquent Youth). At an ideological level, however, the aspect of Sheldon's work which resonates most clearly with the goals of a country during war time could be called the theme of "fitness." One of the concerns of industrialized nations in twentieth century was the question of whether or not male citizens, when enlisted, would be fit to serve.[9] This idea of fitness, like Sheldon's project, referred to both physique and temperament. A fit specimen was the product of good physical and mental hygiene. Although Sheldon at no point ranks each of his somatotype groupings in terms of levels of fitness, it is clear from his comments in the case studies and the Atlas that some types are more fit than others. From his descriptions of what he considers the more successful specimens a definition of ideal masculinity can be extrapolated.

Although Sheldon's project is framed in terms of human constitution or human temperament, the human subjects are inevitably male. The measure of man is the thread that runs through every aspect of his research and publication, including his subject choice, research methods, terminology, and anecdotal asides. Neither is it a case where the male of the species is assumed to stand for the whole human race. Women are seen as significantly different—so much so that he reports considerable debate on whether or not measurements of them can be accurately made using the existing system (Atlas 15). In all four books in the series, women are a separate case which will be addressed in the very near future. However, this much-promised guide to the somatotyping of women never materializes.

Initially, the unique focus on men seems to have been a result of difficulties in

[9] As an aside, the Boy Scouts are a relict of this concern

obtaining naked photographs of young women. In an effort to remedy this in the first text, Varieties of Human Physique, Sheldon includes some drawings to represent female somatotypes extrapolated from silhouettes made for postural studies (67). However, little has changed in the final text, the Atlas of Men, fourteen years later. The same drawings are republished as an appendix, and, yet again, the reader is promised the publication of the Atlas of Women in two or three years.

While cultural taboos about female nudity, which had no parallel in the case of men, certainly impeded his study, it seems unlikely that they made the study of women simply impossible. For one thing, there are examples of images of unclothed women in the work of his predecessors and contemporaries (figure 5), and, for another, it seems that he did, in fact, make somatotype photographs of women, as they were mentioned in the New York Times story. Considering his overwhelming success in winning the co-operation of so many institutions and individuals, if he had turned that energy towards an atlas of women, it seems probable that he would have achieved that goal.

But nothing in any of the texts suggests that Sheldon's main interest lay in women. Very little of his work is concerned with imaging, analyzing or theorizing the female body or psyche. Without even speculating on his sexual orientation (not a particularly productive activity given what his biographer refers to Sheldon's "autobiographical reticence"[10]), one can see that, for Sheldon, the lives and experience of men and their successes or failures in being men were of primary interest. There is no aspect of their bodies, personalities, and life histories in which he is not intensely interested. Whether it is the distribution of body hair, a tendency to collect imported engravings, a desire for companionship when distressed, the thickness of the scrotum, a preference for high, stiff collars, a lack of interest in consuming alcohol or the tendency to

[10] Noting even that it is not clear whether Sheldon was married two or three times.

become belligerent upon the ingestion of it, Sheldon observes and records it all with interest.

Except for the promised texts on somatotyping the female, women only really appear in two ways in Sheldon's series. One way is in case studies as mothers or sexual partners of male subjects. The second is, perhaps surprisingly, as helpers and collaborators. Women, some of them referred to as "doctor," were part of his team in various capacities and are thanked in the acknowledgments. Although, in doing so in the Atlas, Sheldon joked that they, "being women, have naturally done most of the hard work of the project in recent years" (xv)—a comment which I am unsure how to interpret. Does this little witticism smack of chivalry or sexism, or both? Generally speaking, when the spectre of femininity or feminine traits is raised it is with reference to their undesirable presence in a male subject. This brings us to a discussion of exactly what Sheldon's project says about masculinity and how this might reflect ideas and attitudes in American culture during and after the Second World War.

By the time the definitive Atlas of Men is published, Sheldon and his team have discovered eighty-eight different somatotypes. As explained above, Sheldon's procedure was to rate each subject according to their respective levels of endo-, meso- and ectomorphy. Each of these traits was given a rating out of seven, with seven being the extreme of that trait and one being its near absence. That means that an extreme endomorph would be rated a 7-1-1, an extreme mesomorph a 1-7-1 and so on, with many intermediate possibilities. While all combinations were theoretically possible, Sheldon and his team only counted those which they "found in nature." A 7-7-7, for example was such an impossibility that Sheldon suggested that it must be a representation of the Holy Trinity, asking rhetorically, "[f]or what is god, after all, if not a personification of the

extreme manifestation of all three basic components?" (Temperament 146).

In the Atlas of Men, with its emphasis on popularizing somatotyping, each of the eighty-eight known types is described with photographs of subjects illustrating that type at all ages. This was primarily to counter the misunderstanding that the somatotype might change across an individual's lifetime, as when a slender youth becomes heavy in middle age. Sheldon argues that one may no more change from an endomorph to an ectomorph than a St. Bernard could change into a whippet (Atlas 5). If a whippet were to grow fat, it would only be a fat whippet, not another kind of dog. While comparing the different somatotypes to different breeds within the same species, he later suggests that the distance between somatotypes is even greater, that one could no more change into another somatotype than one could change into a mouse, an elephant or a cabbage (Atlas 19).

Although he emphasizes that each somatotype represents a very different kind of man, Sheldon shies away from an overt ranking of the success of a particular somatotype. In saying that "[t]he great strength of human life is its diversity" (Atlas 29), he implies that each type has its place in the grand scheme. It is, however, hard to reconcile this with the playful nicknames by which Sheldon refers to the different types. His example which compares types of men to different breeds of dog is not an anomaly. Suggesting that it might be an "invaluable teaching prop" Sheldon has assigned a totem animal, "a creature the somatotype forcibly suggests" (Atlas 29) to each type in the atlas. Some draw on obvious figures of speech like oxen, bears and whales, but many are less intuitive such as whippets, kiwis and aardvarks. Recognizing that individuals might find less satisfaction in being described by some of these terms than by others, Sheldon makes a slight apology, asking that "no one take offense at these totems. If you do not happen to be a naturalist at heart and do not love these fellow creatures" (Atlas 33). He adds that the totems are

"self-evidently an accompaniment in a minor key to be read or omitted according to the reader's taste" (Atlas 33). This suggestion is somewhat ingenuous, as will be seen in what follows.

Each somatotype in the atlas is introduced first by the animal name, and a short description often accompanied by a drawing of the animal (done by Drs. Hudson Ansley and Aimee Diefenback) for the purposes, Sheldon writes, of "warming and enlivening an otherwise dull procession of numerical abstractions" (Atlas xv). The totems certainly fulfill their official function. Not that any of Sheldon's texts are in danger of being dull, but these descriptions are particularly irresistible. Imagine describing one type of man as an opossum and another as a leopard. Those in the first group are "[d]elicate, furtive marsupials who hunt beetles at night, or whatever scraps they can find, and like bears and woodchucks get fat in the winter. Near innocent of mesomorphy their best defense is to "play 'possum" (Atlas 193) while the second are "[l]arger and taller than the American cougar, and more narrowly built. One of the great athletes of the mammalian world. Probably the fastest big cat. In Southern India they are sometimes man-eaters" (Atlas 123). As these two descriptions are representative in terms of stye and content, it is not necessary to reproduce a great number of them, but the temptation to share more of them with the reader is great. There is something almost scandalous in referring to fellow humans (even by analogy) as delicate and furtive, or as man-eaters, and Sheldon does exactly this for all eighty-eight types.

One of the chief ways in which Sheldon describes each animal is by identifying it as predator or prey and then discussing its ability to fight. If one were to divide the creatures into groups of more and less successful animals, surely it is the predators and those with fighting ability who would come out on top. Of the eighty-eight somatotypes

there are about thirty-five animals who seem destined to succeed and about thirty-five who are destined to be someone's lunch. The remaining dozen or so are somewhere in between. While Sheldon might argue that all creatures have a place in the system, who would want to be a kiwi, a whippet, or a rabbit, when one could be a peregrine falcon, a wolverine or sabre-tooth tiger (for whom our human ancestors must have been "only dessert"?) (Atlas 128). Furthermore, Sheldon himself sometimes uses unambiguously negative terms like "weakling" in the description of somatotypes which have heavily predated, non-fighting totems such as the rabbit.

It would be, however, a perversion of Sheldon's theories to suggest that fighting or uncontrolled aggression were marks of a successful subject. In some cases it is precisely an over-developed tendency towards physicality and aggression (somatotonia) which results in a mal-adjusted personality. In fact, by analogy, he suggests that this same mal-adjustment at a societal level is responsible for the phenomenon of war, saying that "for some time now, as is especially obvious in Germany, a vigorous religious movement has been afoot which is based squarely on unsublimated somatotonia" (Temperament 255). He essentially makes the claim that through better understanding of temperament in the individual (using his system of course) we might be better able to deal with all kinds of social problems, up to and including aggression between states. However, whether it is at the individual or national level, it is clear from Sheldon's descriptions that the ability to fight, when properly integrated, is a more admirable quality than the tendency towards flight.

It is worthwhile to note that in terms of the style of these enlivening descriptions, Sheldon the polymath comes to the fore. As noted above, Sheldon identifies himself as

being a naturalist at heart[11] and the style of his descriptions has much in common with nature guides published during the same era. To provide just one example, Roger Tory Peterson's immensely popular and well-known A Field Guide to the Birds, originally published in 1934, describes "all species found east of the Rockies" in a manner which differs little from Sheldon's description of the eighty-eight types. It is not hard to imagine Sheldon borrowing Peterson's description of rails (birds related to coots) as "plump, somewhat chicken-like marsh birds of secretive habits, shy rather than wary, and much more often heard than seen" (80) to describe one of his less successful types. Likewise, Peterson's description of the nighthawk is casual and amusing. He writes that it is a "slim-winged gray bird we see flying erratically about the after insects high in the air, often over the roofs of cities. It prefers dusk but also flies abroad during the day. In courtship the male folds his wings and drops earthward like a dive-bomber, zooming up sharply at the end of the drop with a sudden deep whir that sounds like the well-known 'Bronx cheer'" (139).

Of course, although Sheldon the naturalist's observations of the hunting habits of hawks and hound dogs are fascinating, the reader of the Atlas one is only able to formulate an image of a successful human type by analogy. To do so directly one needs to turn to Sheldon's case studies, most of which are found in Varieties of Delinquent Youth.

Unlike the Atlas of Men which serves as a field guide to the male of the species, VDY has a more specific focus, that of delinquency. While the first two texts provide the ground-work for establishing the "program and philosophy of biological humanics" and the Atlas is meant as a kind of introductory textbook, VDY focuses on a specific subgroup, populated by the delinquent, the maladjusted, the unsuccessful male. While

[11] Using terminology of the hunter or naturalist is one of Sheldon's characteristic conceits. He describes locating the "spoor" of certain types around college "water-holes" (Atlas 110).

delinquency has a strong association with criminality (in the indexes of some of Sheldon's texts the entry under delinquency tells the reader to "see Crime") in VDY it is not merely limited to law-breaking, but also refers to a variety of behaviours that Sheldon would term "disappointing." It is through the overt discussion of unfitness in VDY that Sheldon's definition of successful masculinity becomes clear, as shall be seen in what follows. Not surprisingly, this definition does not differ significantly from that of the Atlas, although, as noted, it is not expressed through animal metaphors.

When Sheldon introduces us to his subjects in the first chapter of VDY, he tells us that this group of two hundred includes :

> recidivist delinquents, chronic runaways, stubborn school truants, serious students, defiant educaphobes, toughs and gynandrophrenes or "sissies," confirmed alcoholics, abstainers, many who were sexually obsessed, others who were sexually uninitiated, loud rowdies, quiet furtives, barkeeps, strong-arm-men in the making, along with embryo artists, musicians, born ladies' ready to wear salesmen, and would be actors, aspirants to the ministry, jolly panhandlers, homosexuals, homosexual prostitutes, a few pimps, occasional semipro athletes and a couple of prize-fighters. (8)

This list, though perhaps less whimsical than the animal totems to be introduced five years later in the Atlas, certainly gives the impression that there is more than one kind of creature under consideration. Each of the two hundred subjects is presented as a case study including Sheldon's photographs and a biography which is organized around a number of components used to quantify the physical and psychological attributes of the individual. By surveying the biographies which accompany each image, it is possible to identify those traits which are characteristic of a good specimen and those which

characterize a weak one. As noted above, these cases are divided into groups according to a military hierarchy. Most of the characteristics of the "good" specimen are drawn from the so-called chaplain's unit—that is, youths who, though they happen to be at the Goodwill Inn, suffer from no delinquency.

According to Sheldon, a good specimen is vital, strong, amiable, handsome, well-shaped, boldly formed, cleanly chiseled, and has regular features. He is powerful, sociable, kindly, physically courageous and has a bright smile, and good coordination. None of this seems particularly surprising. It is the more extensive list of qualities attributed to the poor specimen which gives us a better idea of Sheldon's particular vision of masculinity. The poor specimen is badly formed, weak, coarse, pudgy, feminoid, coy, microcephalic, pasty, willowy, awkward, ill-shaped, gluttonous, obsessed, mendacious, languid, flaccid, poor at games, lacks drive, cannot fight, is soft, delicate, pinched, dull, sprawling, pale, pathetic, unkempt, or stunted. He has gross features, muddy or blotchy skin, or heavy eyebrows that grow across his low forehead in a solid line. He throws like a girl, is helpless as a sparrow, a weak child, the average grandmother, a floundering woman, a weak and awkward girl and displays persistent homosexuality. (All these descriptions are drawn from the case studies in VDY.)

The emphasis on fighting ability in the Atlas is found here, along with a parallel concern about ability in games and sports. Sheldon himself argues that it might be wise and humane to identify those young men who are not constitutionally fit for sport and physical competition early on. We could, he writes, avoid much heartache, as "one of the most common causes of frustration in the life of the male is the custom of exposing boys promiscuously to the influence of athletic ambition. Possibly not more than five or six boys in a hundred are physically equipped to play a particular athletic game with

conspicuous success" (Physique 226-7). However humane such an accommodation might be, it nonetheless reflects a bias towards physicality and the ability to fight, whether or not that ability is exercised.[12]

Of the characteristics of the poor specimen, the reader will notice not only an inability in terms of sports and fighting, but a general weakness which might be the underlying cause of these inabilities. In VDY, strength, co-ordination, and hand strength are all measured and remarked upon. As an aside, the emphasis on strength and co-ordination is extended to the researchers as well. Sheldon explains that he found the dynamometer (for hand strength) unsatisfactory and replaced it with contests in which the boys turned broom handles in each others' hands and forcibly squeezed the examiner's hand at handshake— a practice which he recommended as a "fine toughening exercise" for the examiners (100)! The examiner's own "toughness" here becomes the standard against which the delinquent youth's is tested.[13]

However, the failure of these young men extends beyond mere weakness, lack of co-ordination, or a limp handshake. The observant reader will have noticed in the list of undesirable characteristics the frequent use of terms associated with females and femininity, such as soft, delicate, willowy and coy. Despite Sheldon's relative lack of interest in women and girls, feminine characteristics play an important role in these case studies. Here signs of femininity are evidence of masculine failure. That femininity is understood as negative rather than neutral is seen in a number of ways, including the use of the pathological sounding term "feminoid" when referring to males with feminine traits.

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[12] Stating his case even more strongly he continues that, "[i]t is probably more harmful to the average boy of 8 to encourage him to want to be a successful football or baseball player than to encourage him to masturbate. He is fairly certain sooner or later to discover the shortcomings in this latter practice, but he has small defense against the inner tragedy of ill advised ambition" (Physique 226-7).

[13] Jennifer Terry remarks in An American Obsession that researchers studying female "sex variants" were likewise encouraged to use their hands as the scale against which bodies (in this case sex organs) were measured (203)f.

Furthermore, weakness is seen as inherent to female-ness (at all ages) when Sheldon describes some young men as being as helpless as the average grandmother, a floundering woman, or a weak and awkward girl.

Unlike the animal totems of the Atlas which Sheldon asks the reader to forgive as a playful pedagogical aid, the use of these similes to describe ineffective males as being like women is not a whimsical flourish. Instead, the measure of femininity in the male becomes an integral part of Sheldon's procedures and terminology as will be examined below. Through his invention and championing of scales by which femininity in males might be measured, Sheldon's original remark that some poor specimen "throws like a girl" is now transformed into a scientifically measurable fact.

The level of femininity is one of a number of secondary variables which Sheldon measures in addition to the primary physical and temperamental constitution. Some of these secondary variables are based on established standardized tests (such as IQ), but most of them, like the primary variables, are of Sheldon's own invention and many reflect his concerns with what constitutes manliness. The main secondary variables include dysplasia, the t component or textural aspect, and the g component or gyandromorphy.[14] To a lesser extent, IQ (intelligence quotient), ID (Index of Delinquency or Disappointingness) and AMI (Appeal to Maternal Instinct) are also measured, although these last two are Sheldon's own creations and appear only rarely outside of VDY. Dysplasia refers to differing somatotypes in different regions of the body (where one might have a powerful mesomorphic trunk but spindly ectomorphic legs). The t component is the overall quality, aesthetic and otherwise, of the specimen. While at one point in VDY he refers to it as the thoroughbred component, generally this is euphemized

[14] He also includes a discussion of hirsutism, saying that it has been of great interest to anthropologists, but has yet to show its usefulness in the study of character.

as the textural component. Of all the variables, it is the t component that most frequently inspires Sheldon's unfocussed eugenic speculation. The last, the g component or gyandromorphy, is the scale that Sheldon uses to measure "the degree or prominence of feminine characteristics in a male physique" (Delinquent Youth 19). So important is this g component that it is measured in two ways, as primary and secondary g. Primary g "the g that you can see at a distance" involves "[f]eminity of general form and outline, of leg-arm proportions, of pubic hair pattern, of fat distribution" (Delinquent Youth 20) while secondary g, "is a measure of the femininity of the face, hands, skin, and skin appendages: manner of movement and coordination: voice and facial behaviour" (Delinquent Youth 20). As always, unable to resist a minor witticism, elsewhere he describes gynandromorphs as being "in quite a real, structural sense women-men (although they are by no means ladies' men)" (Atlas 14) (figure 16).

Just as the primary physical characteristics correlate with the primary temperaments, gyandromorphy is correlated gynandrophrenia, femininity of behaviour and thought in the male. Unlike the primary temperaments, viscerotonia, somatotonia, and cerebrotonia, which are only considered problematic if over-represented or under-integrated in a personality, the mere presence of gynandrophrenia is problematic. It is recorded as an element in the Index of Delinquency or Disappointingness, and is considered a kind of delinquency in and of itself. In VDY Sheldon identifies sixteen "gynandrophrenes" and groups them together to make Company B, Platoon 1, Section 6. They are described as indulging in gynandrophrenic behaviour "with disastrous consequences to themselves or others" (Delinquent Youth 36). Although it is nowhere made clear what these behaviours or consequences might be, what is clear is the undesirability of feminine traits.

In his discussions of the very scientific sounding gyandrophrenia, Sheldon sometimes uses the much less scientific sounding term, "sissy" to mean essentially the same thing. Although not widely used now, the term has a specific history in American culture in the first half of the twentieth century. Its appearance here suggests one way in which Sheldon's conception of manliness was shaped by his times and the culture in which he lived.

As a figure in the popular culture of the period, the sissy was probably the most visible stereotype of the gay man and the epitome of failed masculinity. Not simply a man who had sex with other men, the sissy was characterized by flamboyant dress, affected speech and was a "lisping, swishing, woman-ish acting man" (Bessie Smith in Chauncey 251). In Gay New York, historian George Chauncey explains how, up until the 1940s, sexual identity was not constructed as it is now as homosexual or heterosexual, but existed instead along gendered lines with the most significant division being between sissies, fairies or pansies and "normal" men (103). That this was the common understanding in the era in which Sheldon came of age, began his research, and established his terminology goes a long way towards explaining many of the choices he made in his evaluation of men in the Human Constitution Series. For example, Sheldon's emphasis on effeminacy or gyandrophrenia, rather than homosexuality, as delinquent, could be founded on this.

Saying that the primary delinquency was gyandrophrenia rather than homosexuality does not mean, however, that Sheldon regarded the latter as neutral or positive. Although he nowhere overtly condemns same-sex sex, this may only be that he did not consider this necessary in the period in which he was writing. His reference to cases which display "persistent homosexuality" for example seems to equate

homosexuality with other persistent or difficult to treat conditions across which a clinician might come, such as dermatitis or alcoholism. Elsewhere, when describing a case who has made a good integration, he adds the individual has done so, only "if an adaptation involving homosexuality can be considered good" (Temperament 298).

Although, like his contemporary, Alfred Kinsey, Sheldon inquires into his subjects' sexual histories, unlike Kinsey he is not concerned with defining or measuring sexual practice. For Sheldon, the terms homosexuality and sissy are used in a way which makes it clear that he sees them as self explanatory. He acknowledges that the term sissy is a popular rather than scientific one by occasionally placing it in quotation marks. While both researchers championed the use of distributive, descriptive scales, rather than binary, either/or definitions, Kinsey focussed on sexual identity and behaviour, while Sheldon gauged femininity in men in terms of gynandromorphy and gyandrophrenia (both used seven point scales of 0-6 and 1-7 respectively).

The are a number of possible reasons for Sheldon's emphasis on gender atypical behaviour rather than homosexuality in his studies. The first could be that the popular association between the two was so strong that they were understood as being somehow equivalent. A more plausible reason, however, might have to do with the relatively small number of homosexuals identified in his studies. For example, of the two hundred cases in VT, only seven are identified as homosexual, and two of those are "also heterosexual" while these seven, plus an additional twenty-three men are described as significantly feminine. Rather than speculating on whether numbers of homosexuals are accurate (Kinsey's contemporary study would suggest that they are low) or the many reasons why Sheldon's subjects might not have confided in him, consider instead the problem this raised for the researcher. In a culture in which femininity in men was strongly associated

with homosexuality, how does Sheldon reconcile the relatively rare cases of homosexuality with the much higher number of men whom in his evaluation seem effeminate? Essentially, he redefines the problem. Rather than reading effeminacy as a sign of homosexuality, and thus delinquency, Sheldon cuts to the chase, defining effeminacy as delinquent in and of itself. In doing so he avoids the problem of finding "evidence" of homosexual behaviour at a time when many men would have preferred to conduct their affairs discreetly.

Most interestingly, this maneuver on Sheldon's part, mirrors a kind of redefinition described in Chauncey's Gay New York. Middle class men who felt themselves attracted to other men but were unwilling to identify themselves with the fairy or sissy's flamboyance, femininity and working class identity, referred to themselves as "queer" to distinguish themselves from sissies. These men cultivated an interest in the arts, opera and a kind of anglophilia, as a way of recasting difference as cultural sensitivity or sophistication (Chauncey 126). Chauncey writes that:

> [g]iven the heightened sensitivity that marginalization sometimes fosters, queers often had an acute perception of the degree to which gender and class styles were interdependent and mutually constituted in their culture—of the degree to which [...] class styles were read in gendered terms. Forms of speech, dress, or demeanor that might be ridiculed as womanly, effeminate, or inappropriate to a "real" man in one cultural group might be valued as manly, worldly, or appropriate to a "cultured" (or "sensitive") man in another. (106)

According to Chauncey, this argument that signs of effeminacy were in fact signs of culture that had been misread, was functional for some men, allowing them "to recast,

denigrate and dismiss such ridicule as a sign of lower-class brutishness" (107). In a striking fashion, just as Sheldon's system accommodates the popular figure of the sissy in his definition of gynandrophrenia, the anglophilic queer is reflected in the subcategory of the DAMP RAT.

Sheldon's DAMP RAT Syndrome is honestly the most outrageous of any of his components of temperament. DAMP RAT is an acronym. Each of the letters describes one of the characteristics associated with the syndrome. As such, a person afflicted with DAMP-RAT-ism is a Dilettante, Arty, Monotophobic (cannot stand boredom), Perverse, Restive, Affected, and Theatrical. Gynandrophrenia and homosexuality are explained in relation to this third term. According to Sheldon, not all gynandrophrenes are DAMP RATs, and not all DAMP RATs are homosexuals, but all homosexuals are DAMP RATs and all DAMP RATs are gynandrophrenes. Attempts to diagram Sheldon's explication of the relationship between gyandrophrenia, the DAMP RAT Syndrome and homosexuality result in three concentric circles. The smallest occupied by the homosexuals, the next largest by the DAMP RATs and the largest by the gynandrophrenes. All three categories, as they overlap, or exist in isolation, express a particular iteration of failed masculinity.

In the case of the DAMP RAT, the syndrome is compounded by further failures. Sheldon explains that DAMP RATs are "prone to homosexuality and also to what may be a more serious delinquency—a strongly stubborn perverseness about life and human responsibility in general. They tend to refuse to work or participate in common responsibilities" (Delinquent Youth 106). As such they are not only feminine, but inherently bad citizens. In that all homosexuals are also DAMP RATs, they share these failings, as well as the additional "delinquency" of their homosexuality.

The syndrome is a way for Sheldon to define this particular iteration of feminine, or at least questionably masculine, behaviour, as described by Chauncey. It is not, however, simply an interest in the arts that accounts for the DAMP RAT's delinquency. In fact, another of Sheldon's secondary temperamental characteristics is AI or Aesthetic Intelligence, which is considered a desirable trait (Temperament 285). For Sheldon, the DAMP RAT differs from the truly cultured individual by aspiring to, but failing to achieve, any real aesthetic and cultural sophistication. Part of his delinquency is his imposture. It is not upper class sophistication which Sheldon pathologizes, but pretensions to it. In that the term DAMP RAT is specific to VDY, it could be that young men who have been identified as delinquent tend to come from working class backgrounds and any pretension of upper class sophistication appears as a rather flimsy alibi to Sheldon.

However, despite these suggestive coincidences between Sheldon's terminology and documented contemporary descriptions of gay life, it should be noted that there is not a precise correlation. Principally this is evident in Sheldon's willingness to identify subjects as being sissy or queer but not homosexual. For example, in VT Sheldon describes "one of the campus 'sissies'" (case 186) as an excessively effeminate young musician with a large collection of symphony recordings. After telling the reader that this fellow's temperament is that of a nice young lady and that he is known as "Daisy," Sheldon remarks that the young man in question is not homosexual. In a separate cases (58 and 61) who are also not homosexual, he reports that they are "considered a sissy" and "considered queer."

That many cases could be considered sissies but not homosexuals, suggest that the queer recasting of gender or sexual difference as class difference, described by Chauncey,

was in some ways successful. However, the label of sissy or queer, even if one was not considered homosexual, was still damning. With very few exceptions Sheldon identifies almost all the "high g" or effeminate men as delinquent. All the DAMP RATs, and thus all the homosexuals, are delinquent. Although Sheldon does admit that non-DAMP RAT gynandrophrenes, that is non-homosexual but still sissy types, are not necessarily delinquent, they certainly lack the qualities of "first rate" specimens in his evaluation. His assertion that high-g individuals can resemble nice little old ladies and make good dry goods salesmen, academics and barbers seems to be simultaneously faint praise and an unkind dig at his colleagues (Delinquent Youth).

Along the same lines, in one or two cases in Varieties of Human Temperament, extremely feminine men who have essentially abdicated any pretense of masculinity achieve what Sheldon calls "a happy integration" (351). The best example of this is case 159, a young music instructor who, according to Sheldon "is supreme at afternoon tea. Has a large collection of symphony records. His speech is effeminate and affected" (480). He "talks like a girl, and minces like a literary matron when he walks. When he swears he says "darn." There is the gravest suspicion he wears a corset. His affectation of speech and manner are so complete and so constant that it is genuine. No overt homosexuality is known in his history, and he is perennially engaged" (351). As with all of Sheldon's brief case histories, it is hard not to speculate about the person behind the case number. Having no further information, however, we can really only see him through Sheldon's eyes.

As an aside, one of the many things about these case studies that I find incredible is the fact that all of the subjects were students, graduate students, and young instructors and researchers working on the same campus as Sheldon. For anyone who has ever been part of a college or university department, imagine a similar study with similar scathing

evaluations done amongst your colleagues. Although he does not name names, apart from that Sheldon seems to have little respect for confidentiality. Everyone in his department would have known who was participating in Sheldon's study (as will be further discussed below, it involved at least twenty hours of interviews for each subject) and it seems to me that the publication of his results would be likely be accompanied by considerable speculation as to whom he was referring when he revealed someone's "struggles with homosexuality" or other personal information. As with the animal totems the temptation is to reproduce a number of these descriptions, but I will only relate a few.

The descriptions are striking because they are evidence of an earlier conception of what constituted confidentiality as Sheldon tells us his subjects' professions, hobbies, habits, and nicknames and each is correlated to a somatotype photograph (although, as noted, the face and genitals are obscured). Some of the descriptions concern the sexual preferences of the subjects. In one case we are told that "[a]ctive flagellation has given him excitement and a young woman who enjoys this art exercises considerable power over him" (Temperament 307) while another "has a particularly strong sexual drive which he refuses to curb. He speaks jokingly of retaining the services of an abortionist on a year-to-year basis" (Temperament 309).

The other, even more striking element is Sheldon's sometimes harsh evaluations of his subjects. We are told that one is "weak and flabby in mind as well as in body, and is personal and slobbery in his emotion. But he never offends and therefore he will probably become a successful educator" (Temperament 363), while a young professor "bores his students and reads them only the most conventional lectures [and] [...] loves an afternoon of bridge" (Temperament 344). Although it is clear from this that femininity is not the only failure, it certainly is one of the most consistent themes. Even amongst cases who

are not conspicuously feminine, their failings are often those associated with femininity such as overly emotional, weak minded case cited above.

For those, however, who are identified as not merely having some vaguely feminine trait but are almost entirely feminine their condition is irredeemable. Sheldon consistently refers to the most extreme cases as "girls," sometimes saying that they should have been born female. In these rare cases, the possibility for happy integration exists in abandoning all pretensions to masculine status as we have seen with case 159 above. This possibility, however, is not open to the majority of men, and not even to the majority of gynandrophrenes. Furthermore, while some of these cases are noted as being talented or intelligent, such traits are always overshadowed by the black mark of feminine behaviour. While high scores in variables which are seen as measuring positive traits such as IQ or the t component make for a more successful specimen overall, they are not as integral to successful manhood as the avoidance of any femininity. It is the g component and the measure of gynandrophrenia which makes or unmakes a man. Finally, for Sheldon, feminine characteristics, of which homosexuality is but one iteration, are hallmarks of masculine failure.

Having considered Sheldon's elaborate system for the measurement of masculinity and how that system reflected strong common sense notions about gender and sexuality, it is interesting to consider the role that the central concepts of science and the aesthetics of science played in his research and its reception.

As addressed in chapter two, the concept of objectivity is at the core of classic definitions of science, and it is clear from the time and effort Sheldon puts into defending the objectivity of his procedures that he has much to gain and everything to lose. If his procedures lack in rigor, then his whole project, and his dreams for it as a panacea for

social and physical ills, will all come to naught. Initially working in the field of psychiatry, Sheldon was already more than familiar with the desirability and difficulty of establishing new practices as scientific (Temperament 428). In founding and promoting "biological humanics" Sheldon used every tool at his disposal to define his project as science. These ranged from the development of a new vocabulary, to devoting considerable space in each text to explaining how his procedures were objective, to challenging and expanding the definition of objectivity, to using new technologies, and making particular aesthetic choices in the presentation of his findings.

The development of a new vocabulary was one of the significant ways in which Sheldon harnessed the aesthetics of science to his project. As noted in previous chapters, the power and prestige of science as a truth teller have resulted in the phenomenon where the use of the aesthetic traits associated with science has the rhetorical function of linking the information thus presented with the more desirable attributes of science such as objectivity, neutrality and reliability. These aesthetic characteristics can be visual, as seen in chapter six, or textual. Sheldon uses both. While the visual aspects will be discussed further below, I would like to begin with a consideration of Sheldon's use of language, with particular attention to the terms he coined himself, which could be considered his most enduring legacy. Through the use of terms like associated with science and medicine such as index, component, syndrome, as well acronyms and neologisms coined from Greek and Latin roots, Sheldon spoke the language of science. Clearly he did so in a convincing manner, in that the names he chose for his primary variables, endmorphy, mesomorphy and ectomorphy, have had very long lives.

The lifespan of the corresponding temperamental components, viscerotonia, somatotonia, and cerebrotonia, however, has been much shorter and most of the names of

the secondary variables have disappeared from the lexicon. However, even if these terms lack the longevity of the primary variables, they still were functional at the time of publication in terms of the rhetorical value they had in framing Sheldon's inquiry as a scientific project. The effect of the use of terms like the t component, or the g component, is the conversion of the casual observation of how handsome or how masculine the subject is into a numeral, is similar to that of establishing a specific IQ score. Through making the characteristic quantifiable, it becomes more real. It can be compared to other scores, and norms can be calculated.

Furthermore, describing Sheldon as speaking the language of science is not merely a figure of speech. In using Greek and Latin roots for his terminology he is literally using the languages of science, medicine and learning. Although in the very beginning of his career Sheldon borrowed terms from other physiognomists like Ernst Kretschmer, he invents his own very early on. This rejection of colloquial language functions to remove his observations from the realm of the everyday and make them inaccessible or mysterious to less educated outsiders. The use of complicated terms gives the reader the impression that the concepts which they express are likewise complex. Two terms which function like this appear in Varieties of Delinquent Youth. They are ID (Index of Disappointingness) and AMI (Appeal to Maternal Instinct). This latter term Sheldon seems to particularly relish in that it provides not only an opportunity to measure the youth in question, but also to share his scathing assessment of his colleagues in social work as insufficiently masculine. He explains that "[s]ocial workers, like other people, have an urgent need to be needed and since most of them are frustrated women, or near women, they have a particularly urgent need to mother something" (103)—accordingly, the AMI is a description of how the boys play up to this.

In reading sections of his texts in which he discusses the origins and meanings of his terminology, it is evident that Sheldon got considerable pleasure from this aspect of his work. In one case he even lets the reader in on the process, suggesting that he had considered "exteroceptor-tonia" as an alternative to cerebrotonia. Although he writes that it was probably the better term, he rejected it finally on the grounds that "a man would have to take his pipe out of his mouth to pronounce it" (22). It could be that the pleasure in naming and his claimed desire to avoid unnecessary complexity both contribute to his habit of coining and then simplifying terms, as in the case where gynandromorphy becomes the g component, with the result that there are now two technical terms in place of one. It could also be related to his habit of developing nicknames and short forms for terms, as we have already seen in the assignment of animal totems to each somatotype in the atlas. In another case, after having divided the body into five regions to be measured, he then shares with the reader his nicknames for them. He writes that, "For the purposes of amusement and analogy we sometimes speak of Region I [head] as the control room, II as the engine room [chest], III [arms] as the fighting equipment, IV [abdomen] as the boiler room and V [legs] as the foundational support and driving machinery" (Temperament 131). It is clearly also for the purposes of "amusement and analogy" that he refers to men with large bellies as having "bay windows" (Atlas 209).

However, it seems that sometimes Sheldon gets carried away by his own cleverness, and shows a less charitable side of his nature. An example which demonstrates both the casting of an everyday observation into complex terms and the pleasure Sheldon takes in the terms he has invented is the PPJ, which stands for Pyknic Practical Joke. Rather unkindly, Sheldon writes that in the case of a female PPJ, "in early youth she is highly active and is generally a "pep" girl. Before marriage she remans extraordinarily

slender, like the bud of a late- blossoming tree. The unpracticed eye does not perceive the latent first component [endomorphy]. After marriage the joke is sprung" (Physique 198). Obviously amused with his own joke, which rests on his wit and perceptive observation, Sheldon uses the term frequently, explaining the witticism to the reader on more than one occasion.

At a certain point I cannot help but wonder if it could be that Sheldon's fondness for clever neologisms has an even more serious effect than showing a certain lack of sympathy for his fellow creatures. It seems that, in the pleasure of etymological excess, Sheldon's neologisms might have the reverse of the intended effect. Nowhere more so than in the case of the DAMP RAT, mentioned above. To begin with, the term is surely functional in terms of pathologizing the cases it is used to describe. The mere use of the term "syndrome" suggests malfunction. However, the acronym itself seems arbitrary and bizarre. The terms themselves—Dilettante, Arty, Monotophobic, Perverse, Restive, Affected, and Theatrical—although they provide a clear picture together are individually not that clear. Sheldon does explain that monotophobia is fear of boredom, but the reader might be interested to know that restive is a term used for horses, meaning "refusing to advance, stubbornly standing still or moving backwards or sideways" noting that it can be used also to mean a person who is unmanageable or rejecting control, and is misused to mean restless (def. Oxford English Dictionary). At any rate, even if those seven terms were the only ones appropriate to describe the situation, why that particular acronym? Any Scrabble player would tell you that he could have come up with a number of other options to choose from, such as the innocuous DART MAP or DRAM PAT, or the less flattering DAM PRAT or PART MAD, rather than the bedraggled damp rat. However, it seems unlikely to me, from what I have observed about Sheldon in his choice of DAMP

RAT is accidental, arbitrary or unconsidered. I have no doubt that it reflects a value judgment.

While I wonder about the final effects of some of the terminology, the aesthetic choices that Sheldon makes overall seem to have had a resonance in science and in the popular imagination. The longevity of the endomorphy, mesomorphy and ectomorphy are a testament to his talents in coining and popularizing his terminology. Of course, the language of science alone is not enough. If it were, the inventors of the kind of products sold on late night television and in the back pages of the tabloids would be Nobel Prize recipients. The real battle for the definition of constitutional psychology as science takes place in the pages of the Human Constitution Series where Sheldon outlines his methods and responds to his critics.

From the very beginning of his series, Sheldon consistently devoted space in each of his texts to establishing the objectivity of his procedures. Beginning with the first book in the series, Varieties of Temperament, Sheldon went to considerable lengths to show that his original descriptions of the somatotypes were based on anthropomorphic measurements and still emphasized this in the final book, the Atlas of Men. Interestingly, in the Atlas, he appears to address a number of criticisms which have evidently been raised in relation to his project. From his responses it is clear that some of these criticisms had to do with the objectivity and reproducibility of his procedures and findings. If he needs to state that "[s]tandardization of a practical tool is the present objective" so that "somatotyping can then no longer be characterized as 'something in Sheldon's head'" (Atlas xiv) the reader can not help but speculate that some of his critics have found his procedures to be lacking objective grounds.

The first way in which he addresses these criticisms is by identifying the ways in

which his procedures are, in fact, rooted in what he refers to as instrumental objectivity. Initially he recounts the incredibly labour intensive techniques used in the development of his procedures to ensure their reliability and reproducibility (Temperament 13). Data is painstakingly collected, with hundreds of measurements being taken and then subjected to analyses by independent teams. Of course, as long as Sheldon is speaking of this kind of anthropometric measurement there is no difficulty in recognizing that his project lies within classic definitions of objectivity.

In one particularly extreme version of what Sheldon himself would call the fetishization of objectivity, he and a Dr. S. Stevens working at Harvard in 1938-9 produced a machine operated by a multitude of switches which, when used by even the most untrained assistant, would read somatotypes as accurately as Sheldon himself could with his calipers. He reports that they even "once contemplated a demonstration with a monkey turning the switches to show the method was quite objective" (Atlas 8). This machine did not become part of Sheldon's standard procedures for a number of reasons, the primary one being that it was only calibrated to measure university aged, healthy male subjects. The second was the fact that the use of the machine, like the other anthropometric techniques initially described by Sheldon, was staggeringly time-consuming. Really, the function of this machine was not to produce data, but to show that the data produced was objective in the standard sense of the term (figure 17).

The fact however, that Sheldon uses the particular term, "instrumental objectivity," suggests that he has some concerns about how objectivity is defined and understood. He uses the term to suggest that there are other kinds of objectivity, and that instrumental objectivity can be limiting. He states unequivocally that "somatotyping cannot begin and end with millimeters" (Delinquent Youth 39).

Sheldon's challenge to the definition of scientific inquiry is based on both practical concerns and his preferred mode of research. As mentioned above, Sheldon collected somatotypes from tens of thousands of subjects. The enormous scope of the project seems to be one of the pillars on which he founded his claims for the universality, reliability and usefulness of his system. As such, the incredibly labour intensive procedure of measuring many dimensions of each subject with tape or calipers, or even the monkey operated machine, was unsuitable because there is no way Sheldon and his collaborators would have been able to collect such an impressive and prodigious amount of data.

Furthermore, knowing full well that some the categories which he devised himself such as secondary g or t could not be quantified by any standard measuring device, it would have been frankly unwise to accept instrumental objectivity as the only legitimate means of scientific measurement and observation. He proposes that, for a scientist, careful observation is an equally valuable and reliable tool. This echoes the observations of scholars of science and technology who note that what counts as science varies widely from field to field. While precise instrumental measurement is integral to many areas, there are others, such as primatology, which rely more heavily on observation. In Varieties of Temperament, Sheldon not only identifies the two distinct means of gathering data but also claims that they work in tandem, saying that "[i]nstrumental objectivity and carefully documented observation from life are not really opposed concepts, but are rather like two slopes of a roof" (426).

He clearly states that he believes that it is an error to ignore one half of the structure. He speaks of the willingness in his home discipline of psychology "to make a fetish of objectivity" (Temperament 417), noting that the temptation is great because

"[o]f course, objectivity is safe [...] agreement follows more readily" (Temperament 417). He continues, however, to suggest that the problem with this is that, "objective measures are sometimes blind" (Temperament 417). As a corrective to this blindness he proposes the intensive training of judges and raters in fields such as psychology, saying "somehow we believe such training would be a good investment." He goes on to note that such procedures are not a figment of his imagination and are "common in certain commercial enterprises, where prices of leather, silk, wine, coffee and many other items often depend directly upon the "subjective" judgments of expert graders" (Temperament 412) and though "minor disagreements occur, but they are not enough to prevent general agreement" (Temperament 412).

As noted above, Sheldon presents himself in his writings as something of an iconoclast and rebel. He compares himself to Darwin, saying that, like the great man, he is going "against the conventional academic stereotypes of the day" (Temperament 424). His proposals to renovate the concept of objectivity are presented in the same fashion. He casts himself as one who is brave enough to go against current definitions and to tell the truth. He speaks of objectivity as being "safe" suggesting that he is brave enough to leave this safety in favour of a more complete or accurate means of description.

His devotion to the practice of careful observation and judgment however, is not merely an ideological one, but rather, one which derives from Sheldon's preferred mode of working. It seems to me that Sheldon did not originally devise his system from a collection of instrumental measurements of the body, but rather from observation. As one reads his descriptions of his procedures it becomes clear that the labour-intensive instrumental procedures functioned as alibis to establish the credibility of his undertaking according to standard definitions of objectivity. In practice, most of Sheldon's measuring

was not done with calipers or switches but, much more informally, by eye (Temperament 413). His repeated suggestion that the reader might try some amateur somatotyping on the beach or the subway (Temperament 284) is clearly referring to holistic (and, one hopes, discreet) observation, rather than accosting strangers with one's pocket calipers.

Additionally, his references to his father's skill in the judging of livestock as an analogous practice to somatotyping would suggests that holistic observation was his initial means of proceeding. In his first text Sheldon suggested that the qualifications of a constitutional analyst would be comparable in part to training in cattle judging in that, just as the future cattle judge would need to be interested in cattle and observant of them, the future constitutional analyst would need the quality of being interestedly observant of human stock (Physique 427). The agricultural metaphor continues elsewhere, referring to one of his components which does not lend itself at all to instrumental measurement, he writes that "for those who have attended dog shows, horse shows, girl shows, poultry shows or other competitive exhibits of livestock, the t component is an old familiar friend" (Delinquent Youth 20).

In fact, in that text, Varieties of Delinquent Youth, he shows what I believe to be his true colours. Unlike other texts where he painstakingly lays out the objective foundations of his definitions, in VDY he veers off the path of instrumental objectivity into the uncharted territory of the ineffable. It is also in VDY that the most fugitive and least measurable of his categories receive the most emphasis. Appeal to Maternal Instinct (AMI), Index of Disappointingness or Delinquency (ID), secondary t, and secondary g are all discussed at length and none of those are measurable in any standard way. Some of them such as AMI and ID are not even used in his other studies at all. Most notable, however, in terms of identifying his preferred methodology, in VDY he describes the good

somatotyper as possessing an unteachable, native ability "like a true ear for pitch" (40), claiming that those who "lack the gift" will never "learn to distinguish between a first rate and a fourth rate critter" (Delinquent Youth 40). This is a much more forceful version of his earlier observations many years earlier in Varieties of Temperament that a "great difference in natural aptitude for this kind of work exists" (416).

He backs away from this definition of the good somatotyper in the Atlas, I think partly because he realizes that if this is an ineffable, unteachable talent, then all his proselytizing might be in vain. Somatotyping, however, does continue to be described as something that may be conducted at glance. In the Atlas he compares his ability to identify the eighty-eight somatotypes to the pianist's knowledge of the eighty-eight keys (Atlas 15), or to a small boy's ability to identify every car on the road. People who cannot differentiate between somatotypes are like the boy's auntie to whom all the cars look alike. Sheldon writes, "[h]is aunt Geralda cannot understand how he does it—but she can't somatotype either" (Temperament 411).

Sheldon never relinquishes the belief that the ability to rate and judge is a reliable means of defining and identifying somatotypes. In fact, he uses the more widely recognized instrumental objectivity as a means of showing the reliability of the holistic method. As noted above, the machine constructed at Harvard was created more to test his methods rather than to produce new data. Essentially, rather than using the objective measurements as one half of a sloping roof, as in his metaphor, he uses the objective measurements as a baseline against which to test his observations. To continue the metaphor (perhaps beyond its natural lifespan) Sheldon is saying that if he can build the same roof through observation that he builds with instrumental measurements, then they are merely two means of achieving the same result.

However, it is not only by analogy that Sheldon makes this case. He takes advantage of all available technologies to show the concordance between his two methods. The most obvious is the machine he builds, but the most important is photography. The anthropometric measurements of images made through his photographic system are, he states, a kind of "gold reserve behind a paper currency" (Temperament 413). Photography is the key activity around which all other activities turn. Both instrumental measurement and observation are practiced in relation to the photograph. So, while somatotyping cannot begin and end with millimeters, Sheldon states that, indeed, it "begins with photography" (Physique 81). Initially, photography facilitates collection, analysis and comparison, and assures precision of measurement. Finally, it is the central task around which the entire project is structured, from defining the somatotypes (Physique 46) and determining which measurements are taken (Physique 66), to structuring the primary interaction between researcher and subject.

As noted above, Sheldon's argument for the universality of his system is based on a massive accumulation of data. The use of photography allowed for a Taylorist division of labour which made this accumulation possible. Sheldon states in the Atlas that a team can photograph one hundred people in an eight hour day, that a researcher can do one hundred and twenty measurements an hour, and, if two people work together they can do fifty-five pictures in a day, definitively identifying the somatotypes of about twenty of those.[15] At this rate, a lab can do about one thousand people in ninety working days (105).

Photography also had a number of advantages in that it made it possible to see the

[15] The reason for the discrepancy between the number of photographs measured and somatotypes identified here has to do with the fact that the system at this point was still under development. As noted above, not all somatotypes "exist in nature" (Physique 60) so it was necessary for the team to make decision concerning "hard to somatotype" photographs that had been collected. Were they a new somatotype or an unusual specimen of one of the existing ones? (Atlas 17).

physique from more than one direction at a time (Temperament 5), allowed the measurement of one part of the body at a time for a whole series of photographs (Physique 52) and allowed for the precise measurement of fine details. Sheldon explains that "[t]he actual measurements were made with fine dividers from an enlarged image projected upon a ground glass screen" (Physique 18). Not only did photography make the task faster and easier, it also made it more accurate. Sheldon reports that he found that measurements taken from sharp negatives "are more reliable than measurements taken on the living. Indeed, it appears that there is no precisely accurate anthropometric technique for measuring soft parts of the body except a photographic one, (doesn't work on curved surfaces of course)" (Physique 50). He writes elsewhere that photographic measurements provide a "foolproof objectification" (Physique 80).

So important are the photographs to his procedures that they take precedence over mere measurement from life. As he explains, one of the reasons that little work has been done on females is that "We have not yet been able to secure an extensive series of standardized photographs of women. Consequently, such somatotyping of women as we have done rests on the anthroposcopic techniques alone and has little claim to scientific reliability" (Physique 66). Here photography acts as the guarantor of scientific reliability to such an extent that the project cannot be undertaken in a scientifically reliable way without it.

His claims for the powers of the photograph reach a pinnacle in Varieties of Delinquent Youth in which Sheldon describes his standardized four-minute Somatotype Performance Test (SPT). The result of many years of experiment the SPT was a means of standardizing the interaction between researcher and subject. In his earlier text, Varieties of Human Temperament he describes earlier attempts to standardize this interaction. At

that point the evaluation of temperament involved the much longer twenty minute interview in which the subject was required among other things to sit on a very low heavily upholstered chair from which he had to rise several times, test his hand strength with the dynamometer, accept or reject the offer of an ounce of whiskey at the five minute mark and, choose between a Hershey bar or a cigar at the end of the interview (Temperament 420). All this was to give the interviewer insight into the subject's temperament and is the shorter version of Sheldon's original means of determining temperament which required that he:

> Observe the subject closely for at least a year in as many different situations as possible. Conduct a series of no less than 20 analytic interviews with him in a manner best suited to the situation, and to the temperaments and interests of the two principals. The first two or three interviews are usually devoted to "breaking the ice" and to the medical history, the remaining interviews to the life history, and to special topics or special tests indicated. (Temperament 27)

Less than a decade later Sheldon confidently asserts that the SPT is the equivalent of even this longer procedure, saying that the test which required four skilled operators, provided an equivalent "depth of psychological penetration" to many hours of ordinary psychiatric interview (Delinquent Youth 78). Thus, it was not merely that the photograph showed the truth of the case, but the process of photographing revealed further truths[16]

While photography as a process was central to Sheldon's inquiry and to the definition of that inquiry as objective, the photographs themselves were central to the reporting of his results. I believe that Sheldon's decision to include many illustrations in each text (despite the expense) is significant for the unspoken rhetorical effect that the

[16] Reminding one of the transformative potential of photography claimed by idealists such as Minor White.

images have. In using a standardized technique which produced images reminiscent of those being produced by his contemporaries in medicine, he is tapping into the same virtues of modernity, functionalism and efficiency associated with this aesthetic as outlined in chapter six. Furthermore, because of the association of photographs with unmediated vision, Sheldon is showing the viewer the "evidence" again and again. The photographs ask the viewer to literally see what Sheldon is talking about. In a project based on objective measure rather than observation, this emphasis on vision would not be as significant, but Sheldon really wants the reader to see what he sees.

Finally, however, despite having read the entire Human Constitution Series, when I look at the hundreds of images in the Atlas of Men, I am not able see them through Sheldon's eyes (figure 15). Certainly some of the men are smaller and some are larger, some have long thin legs, others large bellies, or slim waists, but I find I am haunted by the words of the critic who suggested that somatotyping is just something in Sheldon's head. Of course, it could be that, just as I do not have perfect pitch, I also lack the gift, the eye of the good somatotyper. While the sources that attribute the decline in the status of Sheldon's project a result of the psychiatric community's rejection of essentialism after the revelation of the atrocities committed during the Second World War, or more simply to Sheldon's increasingly difficult personality, are probably correct, I wonder if a widespread inability to see what Sheldon was showing us might not also be a factor.

Like the physiognomists whom Sheldon identifies as his predecessors, Sheldon himself has faded into obscurity. While his initial success and the popularity of his theories can be attributed to the considerable interest in eugenics projects in America prior to World War II and to the always enticing promise of physiognomy to uncover interior traits, I would suggest that the continued presence of Sheldon's theories in the culture

was also due to other factors. These include both the methodological and rhetorical strategies outlined above as well as the fact that his findings, by and large, reflected contemporary common sense notions about difference. Drawing on the prestige of science in terms of method, vocabulary, technology and aesthetics, Sheldon transformed common sense ideas into scientific fact—popular prejudices became syndromes and measurable physical features. Queers are now DAMP RATs and sissies are suddenly gynandrophrenes with high primary and secondary g. By means of quantification and analogy men are measured against the standards Sheldon has inherited from the larger culture, and, under his critical gaze, many are found wanting.

Chapter Eight: Appropriation and Interrogation—The Clinical Image in Visual Art Practice

Writing in 1979, artist and theorist Martha Rosler commented that a "new intelligentsia of photography is currently developing in university programs" (40), saying also that, during this same period, photography "made what seems to be its final Sisyphusean push up the hill into the high art world" (9). Although Rosler is ambivalent about the entry of photography into art history and the art world, and its concomitant commercialization (41), the same forces which result in blockbuster exhibitions at the Museum of Modern Art and the discovery of forgotten greats ("to forestall the exhaustion of the stock of vintage prints" (41) writes Rosler) also resulted in the beginnings of serious scholarship. It is during this same period that Susan Sontag's and Roland Barthes's influential texts on the nature of the medium were published and the first real efforts towards theorization since Benjamin were made, as outlined in chapter two (Burgin, Thinking Photography).

There is also no doubt that my own work is a symptom of these developments. I am heir to both the ideas articulated by scholars of photography, including Rosler herself, and their modes of inquiry. Like Rosler, the central problematic of my work is how and what photography means—in my case, specifically in relation to the representation of the body under science. Also like Rosler, traditional academic practices are not my only means of inquiry; as mentioned in previous chapters, visual art provides a second vehicle for the examination of photographic meaning. This alternate practice both complements and expands my academic work in the field.

Although relatively rare in the academy generally speaking, this doubled mode of inquiry is surprisingly frequent in those studies of photography which extend beyond the most traditional approaches. This may have to do with the relative youth of the field of photographic theory, the outsider position of photography in previous iterations of the discipline of art history, and its position as the object of multiple disciplines. Although these facts certainly pose difficulties for the artist-theorist, perhaps the absence of a standard methodology has also had the positive effect of allowing greater freedom and creativity.

This doubling up of theory and practice might also be a result of the much-touted democratic nature of the medium. While many people who study oil paintings, architecture, and poetry have never painted a portrait, built a church, or written a sonnet, everyone has taken photographs. This could make the line between theorist or critic and producer more permeable, although obviously it is not merely a matter of some theorists taking a couple of snapshots. Many of the artist-theorists actually began their inquiries as artists and their theorizing was a response to challenges encountered in their studio practice.

A structural reason for the interdisciplinarity of the field could have to do with the fact that, for practicing artists, the terminal degree in North American universities is the Master of Fine Arts (MFA). This means that artist-theorists working in any media who choose to continue their research in an academic environment find themselves either as new-comers in established departments like art history, in newer programs in communications and visual culture, or in the no man's land of interdisciplinary studies. Furthermore, in the case of artists working with photography, as noted above, photography is not the object of a sole discipline. Some theorists, such as John Tagg have

recognized the inherently multiple nature of the medium by choosing to refer to photography in the plural. The photography of fine art is not the same photography as the photography of evidence, and different disciplines are best calibrated to the study of different photographies.

While chapter two addressed the work of a number of artist-theorists including Alan Sekula, Victor Burgin, Jo Spence, and, briefly, Carrie Mae Weems, for what their modes of inquiry might contribute as models of a politically and theoretically informed practice, this chapter is concerned with the possibilities of studio practice as a means of examining and engaging with ideas about the nature of clinical photography.

There are two significant ways of working with the clinical image: the first is the appropriation of the aesthetic associated with clinical images, while the second is the straightforward appropriation of all or part of an archival image. The former practice can be either through the use of the traditional subjects of clinical photography or through the use of the aesthetic tropes associated with the practice.

So far we have encountered a few artists who have addressed the clinical photograph in their studio work. Among these, possibly the most memorable (or alarming) is Joel-Peter Witkin, whose work is addressed in chapter five. In his photographs Witkin adopts the traditional subject of clinical photography—the unusual body, either living or dead. He also draws on the aesthetics of the nineteenth century clinical image to a certain extent, although the visual vocabularies of other representational practices, such as still life, also inform his image-making. In an unusual move, the aesthetic elements which Witkin borrows from clinical photography are not the elements which code the image as scientific. Instead Witkin has adopted those elements which belong properly to the archival or historical clinical image such as scratches, cracks and

abrasions meant to imitate the patina of age which code the document as unique, historical and precious (Figure 8).

As discussed in chapter five, Witkin frames his work in relation to the discourses of the masterpiece in traditional art historical practice, and the elements he appropriates from the clinical images are those which amplify this reading. It is his investment in what he sees as the pure form and pure expression of the masterpiece which sets his practices apart from the other artists under consideration in this chapter. While Witkin is indulging in the pleasures of pure aesthetics and transgression, the others are concerned with critiquing the exercise of power in certain kinds of looking sanctioned by the clinical aesthetic.

Although very different from each other in many ways, two other artists, Spence and Weems, both address scientific modes of looking and reject the modernist discourses of the masterpiece in favour of a politically engaged art practice. Interestingly, in rejecting the goals of modernism for political reasons, their studio work also changes—their photography is not the photography of modernist formalism. As a result of incorporating text and appropriating and altering archival images, their work no longer fits the mold of art photography. Rather than waiting for the decisive moment they are incorporating text, staging scenarios, and appropriating archival images. Recognizing this tendency in the work of other, better known, artists such as Cindy Sherman and Barbara Kruger, theorist Abigail Solomon-Godeau, identifies such practitioners as postmodern rather than modern, saying that, unlike the latter, they have no allegiance to photography per se (Solomon-Godeau, "Winning the Game" 307). In fact, Solomon-Godeau coins a new term to describe them, calling them "artists working with photography" rather than "art photographers" (Eisenger 263). She is not alone in this observation, writing elsewhere

Burgin, Tagg points that if you asked photographers if either Spence and Burgin were one of them, the answer would "almost certainly be negative" (Tagg in Lukitsh 9).

This is not to suggest however that Witkin's modernist yearnings are somehow an outmoded anomaly. Writing about the state of photography in the academy the 1990s both Deborah Bright and Solomon-Godeau remarked on the tenacity of modernist discourses, saying that modernism remained the dominant tendency there longer than any other field in the fine arts. They noted that "barely a tremor of this groundswell [postmodernism] has reached the domain of art photography" (Solomon-Godeau, Photography 86) and remarked that one has to "practically brush off cobwebs" when entering the photography departments of some of the major art schools in the United States (Bright 4). This situation could have something to do with the relatively late acceptance of photography into the fine arts. If Rosler is correct as identifying 1979 as the moment when photography could be said to have truly entered the ivory tower, then the photography departments observed above had only existed for a scant dozen years at that point. Having only just achieved art historical status, it is understandable that both practitioners and critics would not be prepared to change the terms of the agreement which had gained them entry to academe.

In fact, all the theorist-artists introduced so far practiced more traditional, modernist modes of photography before rejecting them as insufficient for their purposes. Of course, given the political engagement of these artists, modernist tendencies found their expression in the presumed truthfulness of the medium, rather than in the fetishization of the masterpiece that characterizes Witkin's work. Spence, Weems and the others all produced bodies of work based in documentary or street photography which relied on the transparency of the image to bring about social change. Weems, for example,

relied on the transparency of the image to bring about social change. Weems, for example, described her initial engagement with documentary photography in an interview with bell hooks, saying that she found "something very appealing about it, the whole idea that you were somehow describing the complicatedness of the human condition" (hooks 80). However, all of them found that both the practices and the theoretically impoverished conception of photography as vehicle for the truth which lay at their foundation, were ultimately unsatisfying. It is from this point that their efforts to renovate their practice, in terms of both theory and studio work, begin.

As noted, of the artist theorists introduced in chapter two, Spence and Weems are the two who work specifically with the visual elements of the clinical aesthetic. This questioning of the visual vocabulary (Bhabha 68) of a particular photography, is a vital part of a politically engaged photographic practice. It allows one to begin to ask not only what a given photograph might mean but also how it means. By identifying elements of this vocabulary, or the rules of the game, one can then not only question assumptions inherent in the game, but also go a step further and break those rules (Wallis 61). Writing about Weems's early interventions in documentary photography, one critic wrote that this work is vital because it "might provide a critical means to interrupt that smooth narration of power at the points where it is most confining, misleading or exclusive" (Wallis 60).

In terms of intervening in the stories told with the vocabulary of clinical photography, those familiar with Spence's work will immediately think of the images she produced as a response to becoming the subject of the clinical gaze as the result of a diagnosis of cancer. In these images she struggled with representations of the patient in the clinical encounter and the question of how to make largely invisible illnesses visible

outside of the specific practice of clinical photography. As such she was taking the subject of clinical photography (herself) and experimenting with altering the practices of representation associated with it. Her interest in the representation of the other as other however, predates her illness. One of her earliest publications, co-edited with Terry Dennett, was entitled Photography/Power II, and the relationship between the photography and power was one of the major themes she addressed consistently throughout her career in images that were sometimes devastating in their autobiographical content and other times marked by her characteristic sense of play. In one mock anthropological image of herself she stands bare-breasted and barefoot on her front steps holding a broom and gazing directly at the viewer.

One of the central issues in clinical representations which the politically engaged artist is inclined to address is the looking relation between the photographer or viewer and the subject. In choosing to act as her own model Spence found a means of making images which interrogated the clinical aesthetic without replicating the unequal relationship between photographer and subject. She is not alone in this. Other contemporary practitioners, such as Theodore Wan, Mary Duffy, Martha Rosler, and myself, have found this a satisfactory solution.

In my own case, this means of working predates my interest in the clinical image. Always interested in the power of photography to tell the truth and to fix identity, in a practice which has run parallel to whatever else I have been working on at the moment, I have taken many photographs in which I am my own subject. What ties these images together is my interest in the performative nature of identity as articulated by Judith Butler and others. This project provides a space in which to perform alternative, imaginary versions of myself. Figures eighteen through twenty-five in the appendix

provide examples of varying character.

The link that exists between this longstanding project and the critique of clinical images is the fact that, collectively, my images undermine the received notion of the photograph's power to tell the truth about identity. By portraying different selves I am suggesting that self-hood is non-essential and constructed through representational practices. If all of these images are "me" how could one imagine that photography could provide some exterior evidence or expression of an essential inner being? As Spence wrote, her own practice of performing different roles for the camera was a response to theories of subjectivity which seemed "to have rendered obsolete any idea of a single unitary self made visible by an interpretation of surface appearances and the capturing of an essence" (Spence, Cultural Sniping 196). One critic sees Spence's work as an inspiration to other artists "to use the camera for its unfixing, rather than its fixing abilities" (Bright 10).

At a certain point I began to wonder if the fact that such performances were deliberately staged and not at all "natural" in appearance somehow undermined this unfixing effect. However, if one sees identity as performative and representation as always being a kind of interpretation, the idea of nature becomes a bit of a mirage. Furthermore, an image that is the result of the overt acting out of a role for the camera emphasizes the constructed nature of this and, more importantly, other representations. This practice also creates a space where the disciplinary functions of the camera give way to play and fantasy. In conducting versions of this project with my students, one of the most touching aspects of their final products is the tendency (which I share) to picture desired imaginary selves. When instructed to imagine a different way of performing their gender, it is rare for students to veer into parody and they never produce grotesque

images. The project becomes a vehicle for expressing dreams. Having seen this, I can understand why Spence, with collaborator Rosy Martin, began experimenting with performing roles for the camera as a means of self exploration or therapy, although I am not overly tempted to pursue the project myself.

There is one exception to that disinclination, however, and that is a triptych in which I present myself as two paper dolls (Figures 26, 27, 28). Although they share a frontal stance and a definitive labeling with clinical images, really they draw on associations with childhood, echoing the question well-meaning adults ask: "what do you want to be when you grow up?" Made after my first term as a full-time college teacher, they were a means of expressing a certain ambivalence, an oscillation between amusement or alarm, at the prospect that, as a result of teaching all the time, I was becoming a teacher, with whatever that title entailed in my imagination. Using a kind of before and after logic (which actually also echoes clinical practice), I presented the viewer with both the Meredith Doll and the Miss Browne Doll. For exhibition purposes, the dolls were presented on separate cards, each with her own clothes, and also, on a shelf below, cut out and ready to play with. Looking back now, I am not certain that either doll actually looked very happy. But perhaps this was only because the clothes for the Meredith Doll did not fit the Miss Browne Doll and vice versa. The fine print at the bottom of one of the cards, however, promised the appearance of a Dr. Browne doll in the near future. Perhaps this one will look more contented.

At any rate, to return to the potential of the camera to unfix identity, while the individual images resulting from the performance of different selves can be interesting, amusing, or surprising, it is the cumulative effect and the juxtaposition of these images which I find most productive in terms of challenging dominant ideas about photographic

truth and identity. This effect is particularly pronounced in images where I appear masculine, or even male. Viewers consistently protest that it cannot really be me (Figures 29, 30).

The aesthetics of science only began to appear in my work as the result of my final project for my M. F. A. which concerned the frequent metaphor which compares the human body to land. In the process of reading about representations of land I came across a number of critiques of cartography, which debunked the common assumption that maps are entirely objective scientific documents. Because I was comparing land and bodies, I began wondering about the objectivity of images of the body made under science. Imagining the clinical image to be a kind of corporeal cartography, it seemed possible that it might be subject to parallel critiques. It was those speculations which eventually led to this project.

As such, it was with the beginning of this project that I began working with elements of the visual vocabulary of clinical photography. Reading about the role of women in the history of medicine I was struck by the arbitrary nature of diagnoses and the disciplinary nature of treatments in the past. This has been widely noted by scholars in a number of disciplines in relation to study of hysteria in the nineteenth century, a disease which was inextricably entwined with definitions of femininity. Most studies focus on the work of Jean Martin Charcot, one of Freud's teachers, which is of particular importance in the history of the search for the legible body as he was one of the first clinicians to use photography extensively both in the diagnosis and definition of the condition. "An admirer of Charcot remarked that the camera was as crucial to the study of hysteria as the microscope was to the study of histology" (Justice-Malloy 134) and when the suggestion arose that he invented the conditions he described, he was said to have

replied, "[b]ut in fact all I am is a photographer. I describe what I see" (Justice-Malloy 137) (Figure 1).

Another disease condition, identified a little later on, but with similar effects in terms of the regulation of feminine excess, was chlorosis or "green sickness," a kind of anemia that was understood as only afflicting girls. Historian Keith Wailoo emphasized the role of the diagnosis of chlorosis in managing both young women who were considered out of control and cultural anxieties about the changing roles of young women. Called chlorosis for the supposed green-ish tinge of the chlorotic girls' complexions, a diagnosis was based on a doctor's perception of this and tests showing low iron count (something to which most women are prone). That any girl who was seen as being out of line might be diagnosed and then disciplined through a regime of moral management in an institutional setting emphasized the power of medicine to define and control. However, unlike hysteria, the visual element of the diagnosis was not recorded photographically. This was, of course, because the monochromatic photographic technologies of the time could not record slight changes in complexion.[1]

In the absence of any image of the chlorotic girl, my suspicions that I might be a good candidate for the diagnosis myself led to a self-portrait as a "chlorotic girl." A definition of the condition (drawn from the Oxford English Dictionary and Wailoo's article) was printed on the wall beside a life-size image of myself against a green background. It read:

> chlor os 'is, n. Green sickness, virgin's disease, anaemic disease of young women originating in overwork, underwork, physical activity, scholarship, capricious appetites, poor eating habits, high-pressure education or high-

[1] Although, because of a greater sensitivity to the red spectrum than human vision there were some instances recorded where small pox marks were visible in the photograph a few days before they were evident to anyone.

stress labour. Hence, ~ot'ic a.

It is not difficult to see how widely applicable the diagnosis would have been, or could be now if the disease category still existed.

This was my first foray into a consideration of how the aesthetics of medicine might be as powerful a means of defining the patient as different or deficient in some way. In an accompanying installation entitled Implied Pathology this image was grouped with a series of other images in which I was just as arbitrarily defined as being the victim of a series of conditions which ran literally through the spectrum from scarlet fever, to yellow fever, and so on (Figure 31).

To return to the work of other artists interested in the definitional power of the image, in 1989-90 Carrie Mae Weems produced a series of portraits, entitled Colored People. In this series she tinted and labeled the images according to the various terms used to define "colored" people in America, noting the many divisions within blackness, such as high yellow or blue black. This relationship of portraiture to labeling and metaphorical uses of colour, which in my hands produced a series of images of myself as the imaginary victim of arbitrary diagnoses, in Weems's approach resulted in a serious critique of the political and social implications of the definition of racial difference. It is, however, in Weems's 1995-6 series, From Here I Saw What Happened and I Cried, that she directly addresses the power of the clinical aesthetic to define the other.

The series consists of thirty-two images appropriated from a variety of archival sources from the science, to anthropology to contemporary art. The images from this series which now reside in the National Gallery of Canada are based on four of the nineteenth century daguerreotypes of slaves commissioned by Harvard anthropologist Louis Agassiz. Rather than attempt to find and magnify traces of dignity in these images

and recuperate the portraits as honorific, as we have seen Trachtenberg do in chapter four, Weems does the exact opposite, amplifying the racist ideologies which informed their production through literally making the images larger (twenty inches square), tinting them blood red and incorporating text which explicitly states their effects. The phrases "You Become a Scientific Profile/An Anthropological Debate/ A Negroid Type/A Photographic Subject" are etched onto the surface of the images. Weems's elegant, effective and subtle intervention provides a model of a politically engaged contemporary art practice addressing how photography has historically played a role in naturalizing dominant readings of racial difference. Her appropriation of images which have been described as painful documents of racist ideologies prevalent in the past, not only challenges those ideologies but also works to counter contemporary common sense ideas which are based upon them (Figure 32).

Anne Maxwell, writing about these same images notes the one-sided nature of the looking relation, remarking that the subject's return of the viewer's gaze is probably the exception rather than the rule in scientific images of "native" others. Although there certainly are images in which the subjects gaze back at the viewer, often they are photographed in such a way that they do not return our looks. Maxwell reads this as evidence of the unequal status of the participants in the photographic encounter. Thus, Jo Spence's direct gaze from her front porch might also be considered as a kind of challenge to this unidirectional scrutiny.

The inequality between photographer and subject carries over into the relationship between the viewer and the subject. The downcast or averted eyes of the subject place the viewer in an absolute position of mastery, where the body of the other can be examined without any kind of discomfort or challenge. This effect is also apparent in other kinds of

clinical images where the patient has been made anonymous. While the ethnic other is often coded as another kind of being from another place and another time (always the past), there is a possibility that the figures in clinical images are citizens, with the result that the photographer might feel an obligation to protect the subject's identity.

There are a number of means by which such concessions to modesty are accomplished: images are cropped so that heads are "cut off," faces are obliterated in the darkroom, subjects wear masks or are draped with towels or whatever else is at hand. Of course, provisions for anonymity are by no means universal. For example, hundreds of cartes-de-visites images made during and after the Civil War feature wounded soldiers, sometimes wearing partial uniforms, gazing proudly at the photographer (Figure 10). Perhaps the feeling that the wounds depicted were earned honorably conditions this, but there are similar images of civilians in medical journals such as the Journal of the American Medical Association (JAMA).[2] However, even if it is not universal, if one considers the fact that obscuring the face is an aesthetic maneuver which appears consistently throughout the entire history of this particular photography and is more or less unique to it, it is obvious that it merits some attention.

Looking at these anonymous photographic subjects, I began to wonder about the experience of being photographed in a clinical setting. While considering in chapter six the aesthetic currents in the larger culture which might have been appropriated in the professionalization of clinical photography, I came across some sources which suggested that patients regarded the prospect with some trepidation—sometimes because of taboos over nudity and sometimes because of the negative associations of a particular disease such as syphilis. It was only, however, Stanley Burns's reproduction of the O. G. Mason

[2] Connor and Rhode point out that nothing at all was obscured in most of these pictures, even soldiers' genitals. The one case in which an actual leaf is used is the exception. However, when the images were put on public display at the Philadelphia exhibition leaves were added universally.

image described in chapter five and a reading of it which emphasized its aesthetic and erotic qualities which prompted me to question whether these well-intentioned efforts to preserve patient dignity really had the desired effect.

Rephotographing a number of images in the JAMA which employed this technique I used these prints as models for self-portraits. In juxtaposing these new portraits with the archival images and annotating both with Burns's orientalist fantasy, I hoped to draw attention to objectifying tendencies of the clinical photographic gaze and the collector's reinterpretation and to perhaps reattribute a kind of subjectivity to the women pictured.[3] Finally, the experience of being photographed in this manner in which one is effectively blindfolded, confirmed for me the subject's absolute lack of control and feeling of exposure in this scenario. As a means of giving the viewer a sense of this, I transferred the images onto the towels used to preserve my anonymity in the photographs and hung them at approximately head height in the gallery. This way, although looking at the fabric from the outside rather than the inside, the viewer might have some material impression of the subject's experience, thus cultivating a kind of empathy as a corrective to a fetishized objectification. The entire piece as it was installed is seen in figure 33, while details showing the images and text are seen in figures 34-40.

In any case, this is difficult, as the visual vocabulary of the clinical image invites inspection and objectification. Privileging the visual, and assuming that showing is telling, the clinical image invites us to look. In its ideal form, as seen in chapter six, the clinical image is designed to deny individual subjectivity and any potential untidiness which that might occasion. As Foucault writes in The Birth of the Clinic, "if one wishes to know the illness from which he is suffering one must subtract the individual, with his particular

[3] The new self-portraits were hung above, with the corresponding archival image as a kind of footnote beneath.

qualities" (14). Although the reasons for the anthropological subjects' averted eyes and the anonymity of the clinical image are different, the effect of transforming a photographic subject into an object to be studied is the same, and possibly even more pronounced in the latter case.

This transformation is the function examined in the last of my own pieces under consideration here. The installation, Subject: Control, references the historical role of science in defining difference addressed in chapter one, the powers attributed to photography in chapter two, and the identification of the visual elements of the clinical photograph undertaken in chapter six. Furthermore, in that the installation is essentially a machine for framing the body as the object of the scientific gaze, it is related to the apparatus designed by constitutional psychologist W. H. Sheldon for the production of somatotypes. An element of the scientific photograph of the body which appears here, but has yet to be discussed is the Lamprey grid. The grid of two-inch squares was designed and promoted by John Lamprey for the creation of standardized anthropometric field records (figure 41). Replacing earlier systems which only recorded the subject's height, the grid provided a means of picturing the relative size of all body dimensions, in a way which was standard from image to image. Sheldon used the grid in his earliest images and it also appears in twentieth century time and motion studies. With the further association of the grid with the graph paper which is used to represent "science" in popular culture, the use of Lamprey's device looks scientific.

The way in which this piece differs from other work concerned with the role and function of the clinical image is that, if the viewer truly wants to occupy the masterful position usually granted by the employment of the visual elements of the clinical photograph, he or she cannot avoid becoming the objectified, quantified subject of that

practice. While a control group of twenty-five cartes-de-visites size, black and white images of adults, either in profile or from the front, is presented, in order for the the viewer examine it, he or she must pass by a mirror, the same size and position as the control group to the right. Behind the viewer, a suspended Lamprey grid and the word "SUBJECT" are reflected. This label which floats in the mirror above the viewer takes on a double meaning in that the viewer is subjected to a particular discourse by which he or she is produced as the subject of study (figures 42, 43, 44). This enactment of the process in which individuals may become interpellated as subjects in the discourses of medical science (within the space of the gallery) provides the participant with a physical understanding of the procedures involved, thus disrupting the naturalized/common sense assumptions which support them. The manner in which the aesthetics of evidentiary portraiture rhetorically produce evidence of deviance and pathology, regardless of whose body is pictured, is particularly striking. Demonstrating this process to the viewer in relation to his or her own body is a clear way of showing the powerful, convincing, and ultimately arbitrary nature of such evidence.

While my entire project could be described as the accumulation of the necessary theoretical tools for the study of archival clinical images, the images and installations discussed above are the direct result of a parallel process of visual inquiry addressing the problems such images pose. The often stated desire to intervene in the repressive effects of ideas about embodied difference such images have been used to sanction, finds expression in these projects, just as it does in the case studies in the text.

Despite this desire to intervene, however, I am by no means, the "post-modern ideologue" described by collector Stanley Burns in A Morning's Work, who wishes to turn my back on the benefits of scientific medicine. Like science and technology critics

who reject the criticism that they are engaging in "science bashing," I would argue that a more complete understanding of how any element of this powerful and prestigious branch of knowledge functions, whether on a methodological or aesthetic level, is beneficial to practitioners and outsiders alike. However, unlike those, such as Sandra Harding and Henry Bauer, whose primary goal is to change the practice of science and bring it nearer to its stated ideals, my project is more closely related to science and technology studies which have addressed the relationship between science and the culture at large. Particular to my study is the focus on the rhetorical effects of the aesthetics of science, especially as they are employed in the representation of the body.

Conclusion

As a result of there being no single body of theory, nor any established methodology for the study of the archival clinical image, this project was inherently interdisciplinary from the very beginning, even before taking into consideration my studio practice. As a result, I found myself turning to a number of disciplines for what I could glean from them as the ground work for this project. If I were to begin a similar study right now, given the development of the field of Visual Culture in recent years, that area might provide a kind of unifying theoretical framework. Of course, given that historical or archival imagery is a subsection of the field, secondary to contemporary material which receives proportionally more attention, one might end up with an equally broad range of fields to consider as appropriate background material.[4]

In any case, each of the fields I have examined have elucidated different aspects of the relationships between science, photography, and the body in representation. Feminist critiques of science and technology provided the basis for understanding the role science has played in defining human difference and the idea that discourses within the science influence and are influenced by ideas in the culture at large. Theories of photography have provided theoretical approaches to the medium which do not rely on a simplistic understanding of photography as merely mimetic. They have also provided a model for a politically engaged studio practice and the theoretical grounds for understanding the role of visual representation in ideology. John Tagg's conception of multiple photographies

[4] Also, in terms of disciplinary development and change, in all fairness I have to acknowledge that art history no longer necessarily resembles the hide-bound practice described by Rosler, Tagg and Solomon-Godeau. Projects housed in the discipline are now addressing an increasingly broad range of visual artifacts, rather than only those which are deemed to belong to high culture.

which rely on different conventions and articulations to discourses and institutions provided the grounds for examining the cultural effects of a discrete practice, such as the clinical image, while his recognition that conditions of production and circulation affect photographic meaning allowed for the consideration of the way that meanings can change over time. Studies of the body in representation outlined the transformational powers that are commonly attributed to processes of picturing the body, what the body can be made to mean through diverse representational practices, and how these different bodies can serve as points of identification, desire or revolution. The understanding that aesthetic discourses do not function discretely, but influence each other across lines between disciplines and the imaginary border between high and low culture provided a key to the subsequent consideration of the influence of other aesthetics and discourses on clinical imagery. Turning from the ideas which inform the making of clinical images of the body to the material object of the clinical image itself, the subsequent chapter, "The Afterlife of the Clinical Photograph: Early Clinical Images as Source Documents (1849-1920)," addressed the ambiguous role of the image in historical study and the various methodologies to which scholars from diverse fields have turned as a means of incorporating photographic source material.

Having addressed various approaches to the problem of how to conduct the study of archival clinical images, the project concluded with three case studies and a discussion of the role of visual art practice in the final chapter. The first of the three case studies was an examination of the afterlife of a particular clinical image, examining how it has, through three successive incarnations, come to mean three different things. The second case concerned the didactic texts which appeared with the professionalization of clinical photography in the period after 1930. Through the examination of the authors' stated

goals in terms of aesthetic reform and by postulating what the origins and results of these might be, I addressed the question of the origins of the aesthetic elements associated with the clinical image, and what the results of the incorporation of these might be on the reception and reading of the images and, by extension, the profession as a whole. The third and most extensive study is of the complementary visual and textual work of W. H. Sheldon. Drawing on the theoretical and methodological models of the rest of the project, this chapter provided an extended consideration of how Sheldon deployed the methods and aesthetics of science to present a vision of ideal and flawed masculinity which echoed common sense ideas about gender and sexuality while simultaneously reifying them as scientific fact.

In any case, it is perhaps not surprising that, given the multidisciplinary foundations of my project that, although many suggestive ideas about science, photography and the body present themselves, finally, some of them remain underutilized. For example, an extended reading of archival clinical images in relation to theories of the abject, the grotesque, and the pornographic would certainly be productive. Likewise, an extended consideration of the work of other artists, such as Lorna Simpson, Cheryl Simon, Mary Duffy, Genevieve Cadieux, or Theodore Wan, whose work incorporates clinical aesthetics would be of considerable interest.

Having accepted the invitation of my predecessors to seriously consider the archival clinical image, I present these results of my investigation as a contribution to a nascent field of study. Following their example, I also imagine that future scholarship might build upon these efforts to make connections between previously isolated bodies of theory, and identify potentially fruitful methods of investigation in theory and in visual practice. There are a number of reasons to predict a continued, and possibly increasing,

interest in archival, scientific images of the body, including the establishment of programs based around identity categories such as sexuality, the growth of the interdisciplinary field of Visual Culture, and the increased availability of clinical images of the body through specialized websites of such varied character as the Burns Archive, the Image Archive on the American Eugenics Movement and Inner Explorations. If indeed such images do see an increased circulation, whether in fetishized or commodified appropriation or as the object of scholarship, the need for critical, historically grounded readings of them will be that much more vital. The understanding of role that the aesthetics of a given photography plays in the development and maintenance of ideologies of difference, whether cultivated in scholarly or visual projects, is integral to challenges to the statements clinical images make about the self and the other. Given the persistent tendency to read images which employ the aesthetics of science as truthful and objective, one would hope that this new chapter in the afterlife of clinical images would provide an opportunity to denaturalize common-sense ideas about human difference rather than result in their reification.

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APPENDIX

Figures 1-45

Planche XXIII.

ATTITUDES PASSIONNELLES

EXTASE (1878).

Figure 1

Figure 2

Figure 3

Figure 4

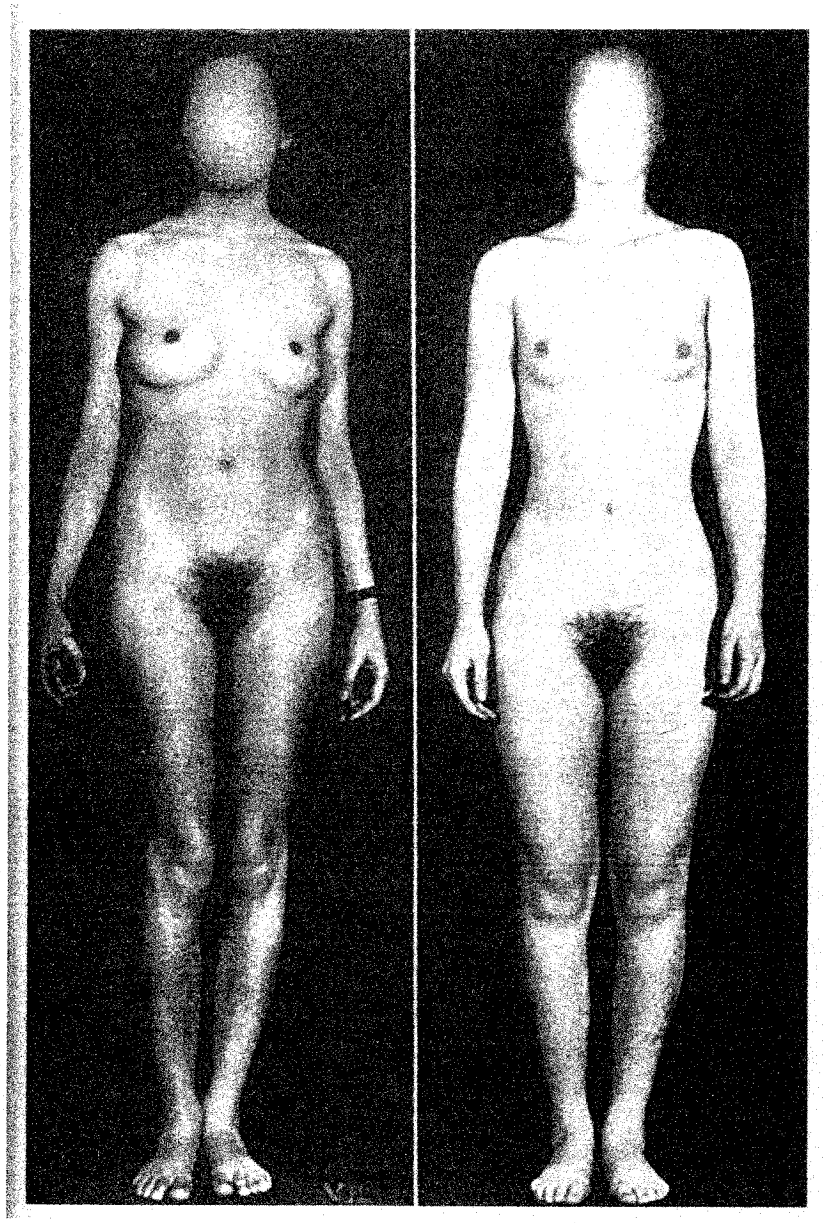


Figure 5

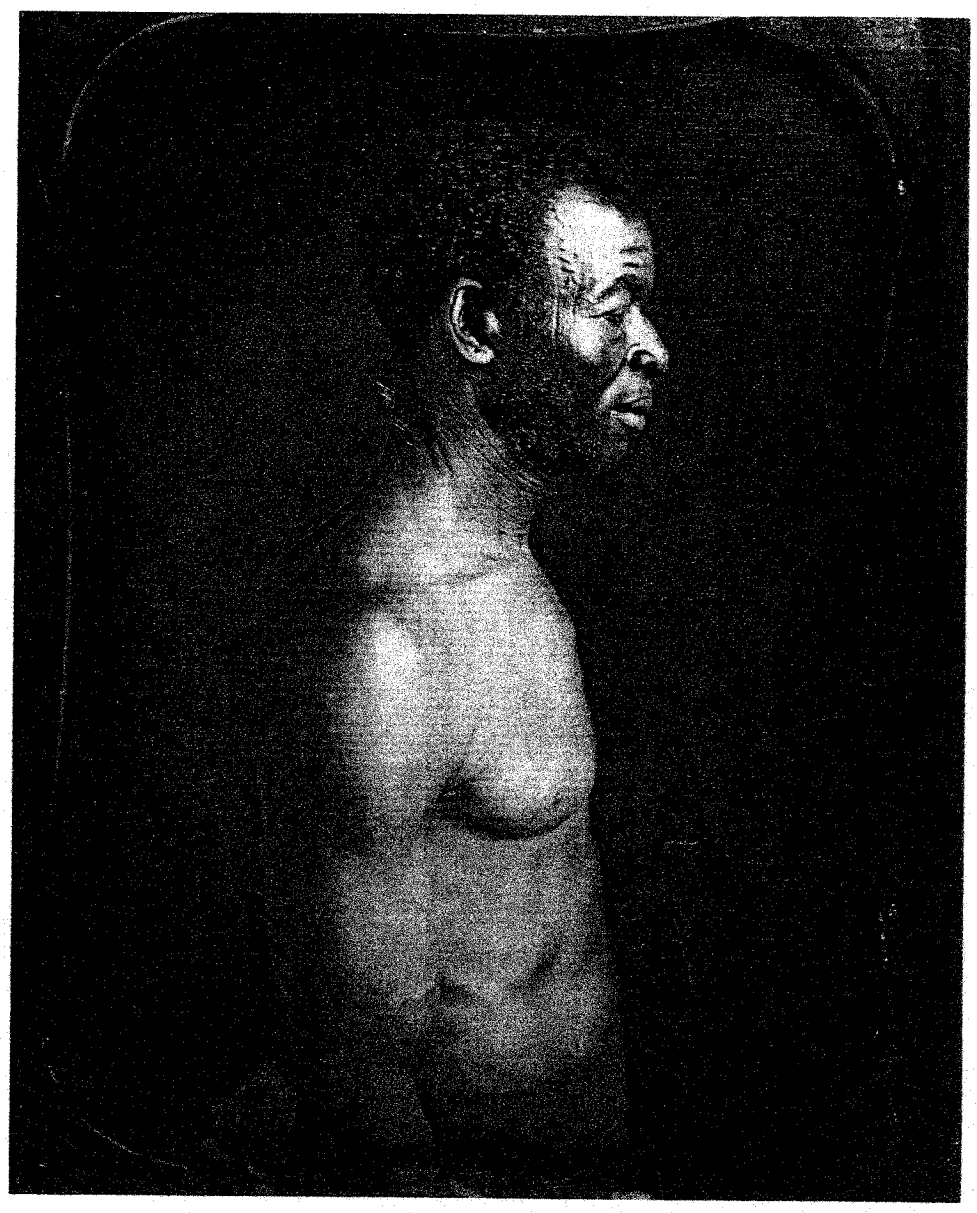


Figure 6

Figure 7

Figure 8

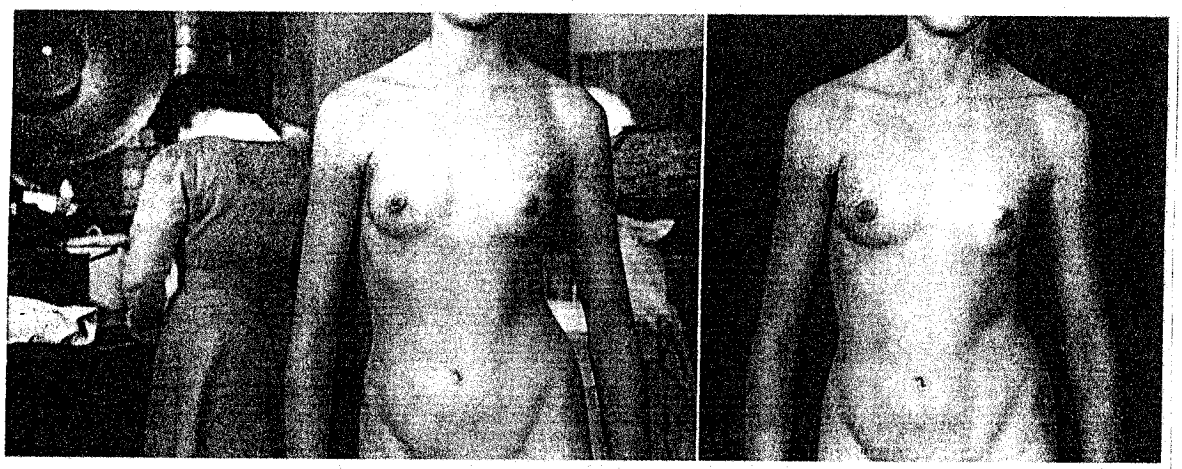


Figure II-4: The laboratory sink is not present in *A*, but practically everything else is. Such distracting background details should be avoided so that full attention can be paid to the subject. A simple grey background curtain was used for *B* and this makes the great deal of difference in clarity between the two records (apart from judicious trimming).

Figure 9

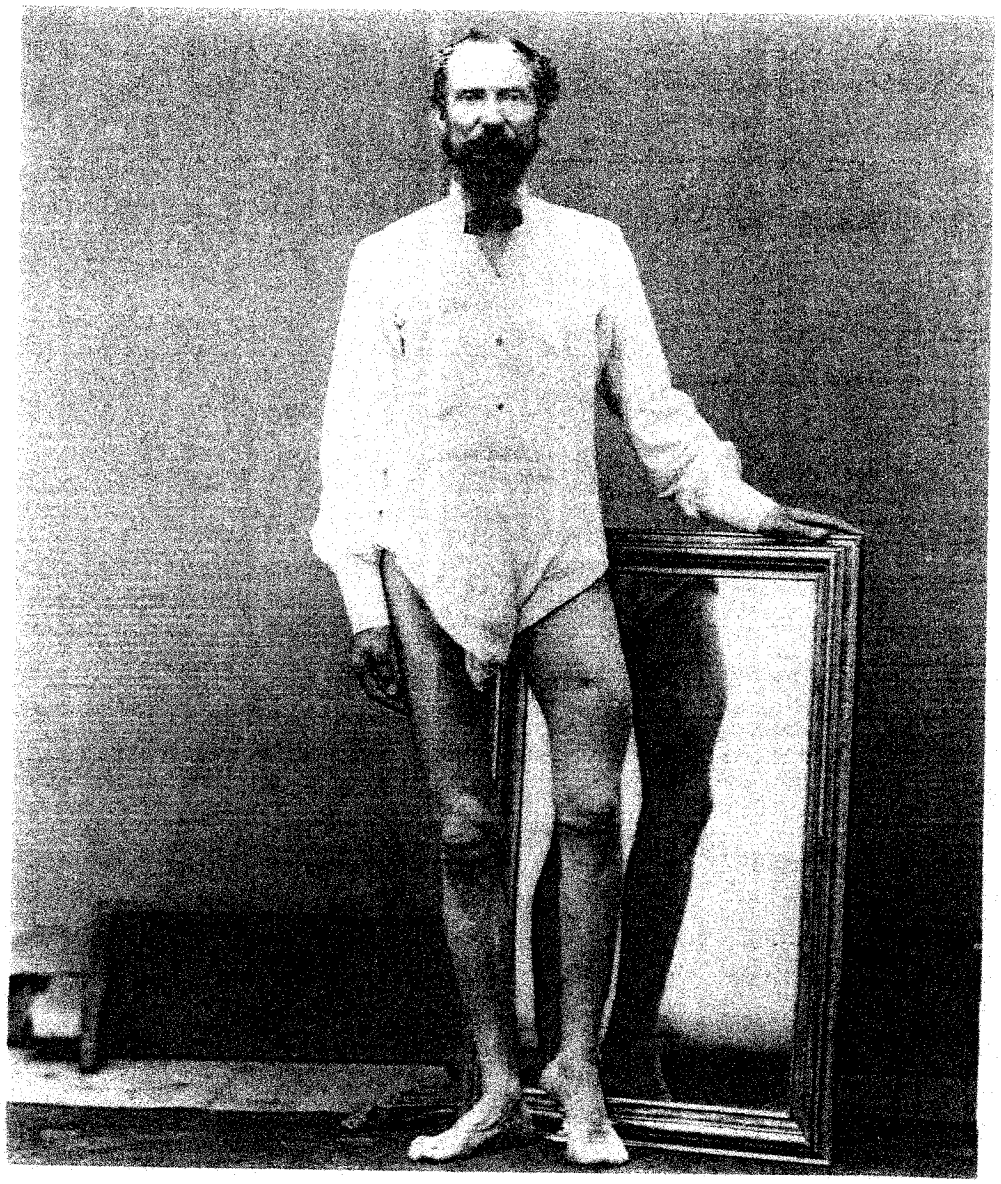


Figure 10

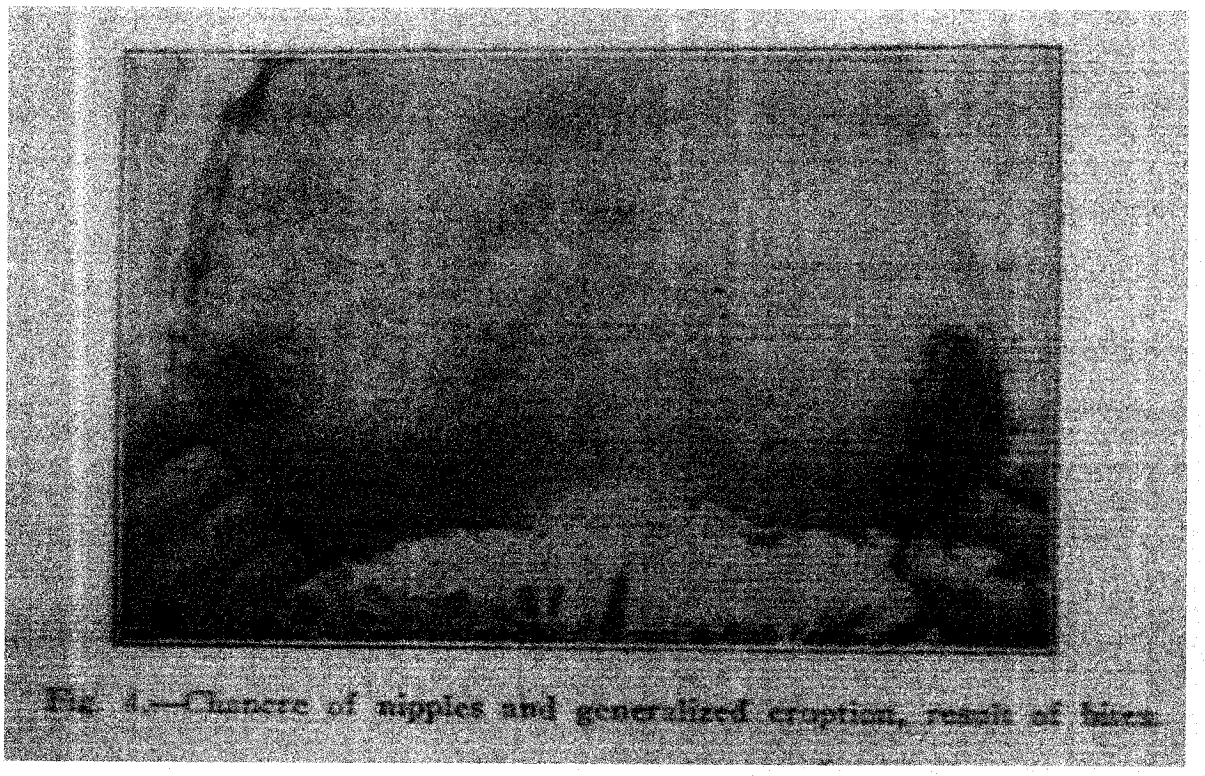


Fig. 1.—Cancers of nipples and generalized eruption, result of bites.

Figure 11

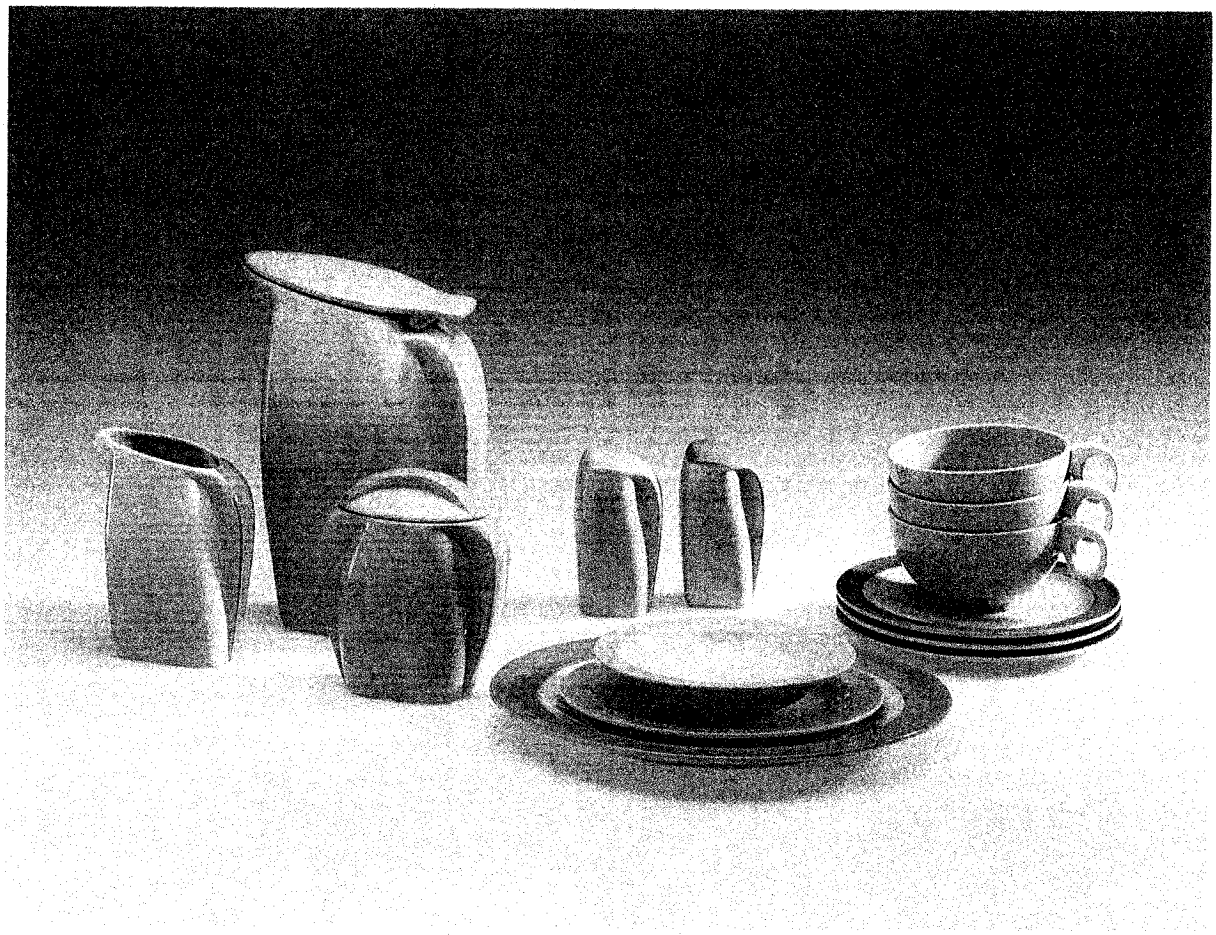
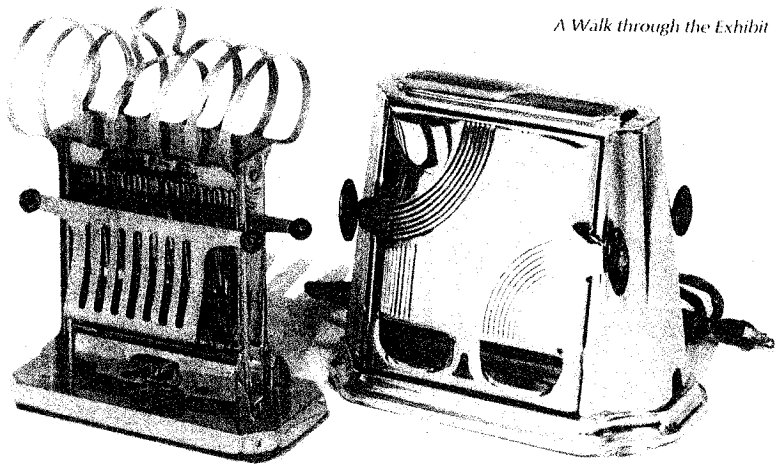


Figure 12



A most striking contrast in form is offered by the Universal non-automatic toaster at right, and the c. 1935 Son-Chief at far right, which operated in exactly the same way but concealed the heating element within a styled exterior casing. Similarly, the automatic Toastmaster from the late 1920s, below, looked distinctly old-fashioned when the streamlined Sunbeam toaster to its right appeared on the market in the late 1930s.

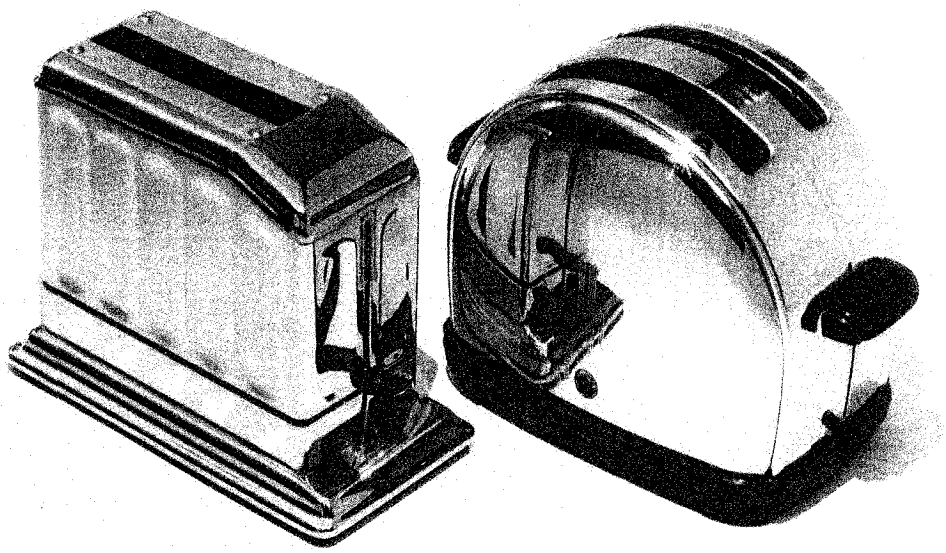
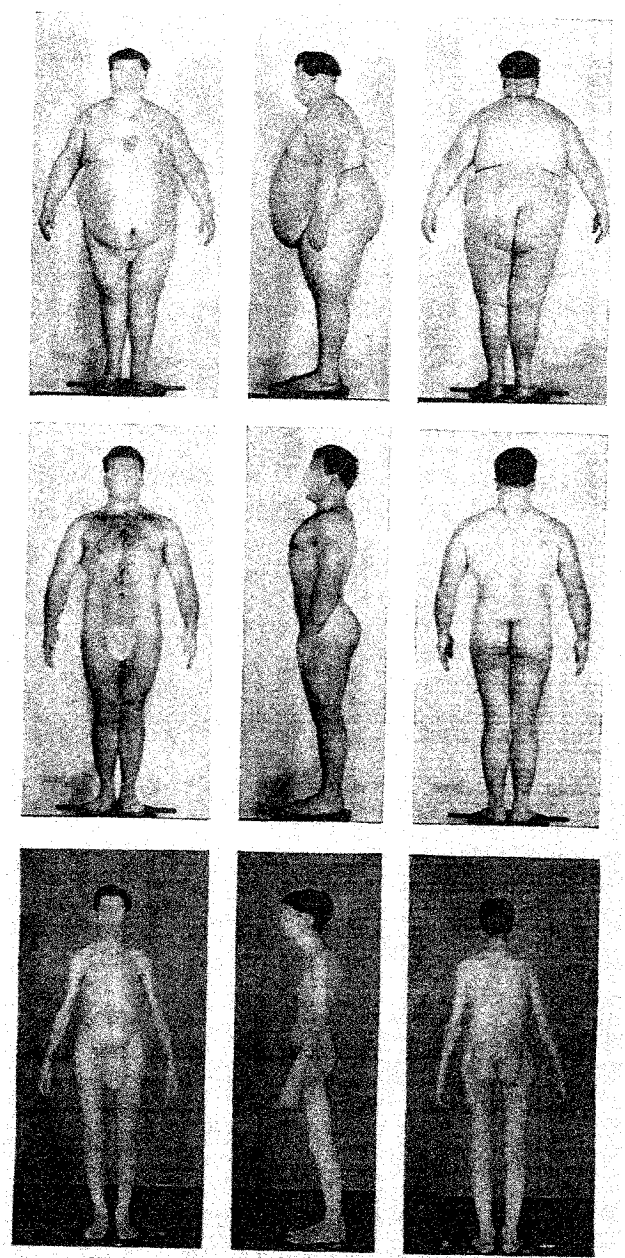


Figure 13



Three extreme varieties of human physique

Figure 14

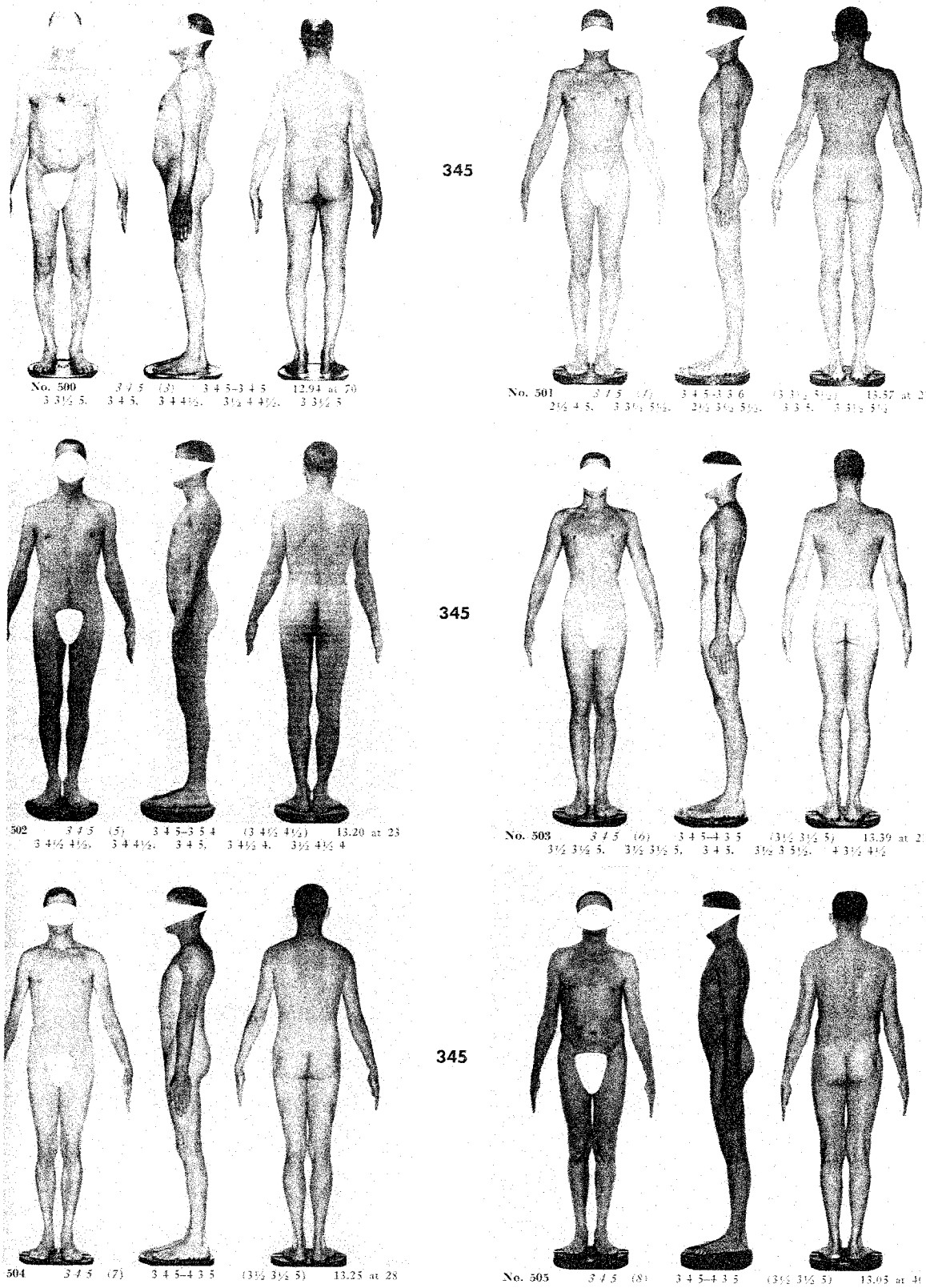


Figure 15

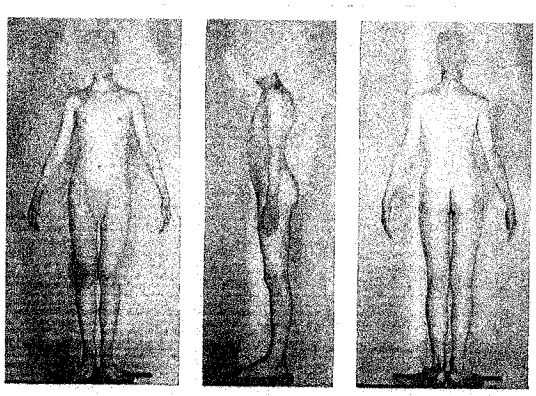


FIG. 23. The somatotype 216–326 (216, 216, 216, 326, 326)

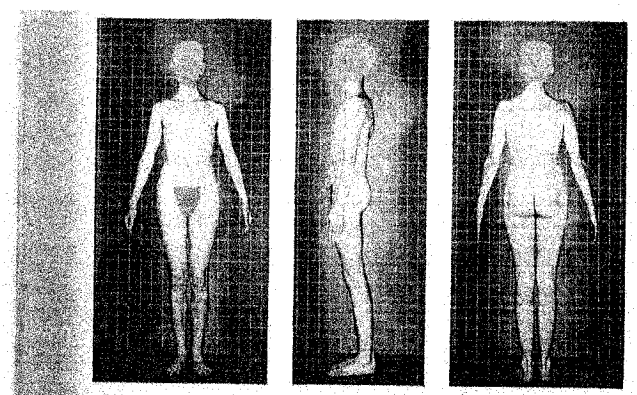


FIG. 25. The somatotype 316–316 (316, 316, 316, 216, 326)

Figure 16

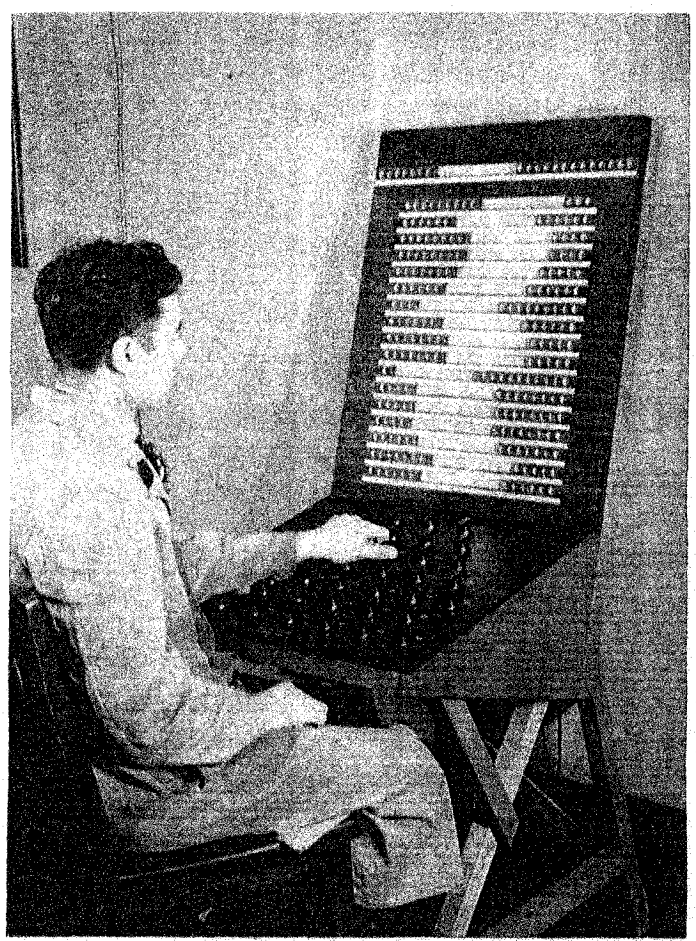


FIG. 8. A machine for determining the somatotype from anthropometric measurements. Procedure: The anthropometric measurements are made on a photograph. A slider is set to the measured value of each of the 18 anthropometric indices (horizontal scales). By turning a switch (one switch for each somatotype) the operator turns on a light (seen as a bright spot on each slider) corresponding to some one value of each anthropometric index. The operator's problem is simply to determine which switch will turn on lights nearest the centers of the sliders. The somatotype corresponding to that switch is the somatotype of the individual.

Figure 17

Figure 18

Figure 19

Figure 20

Figure 21

Figure 22

Figure 23

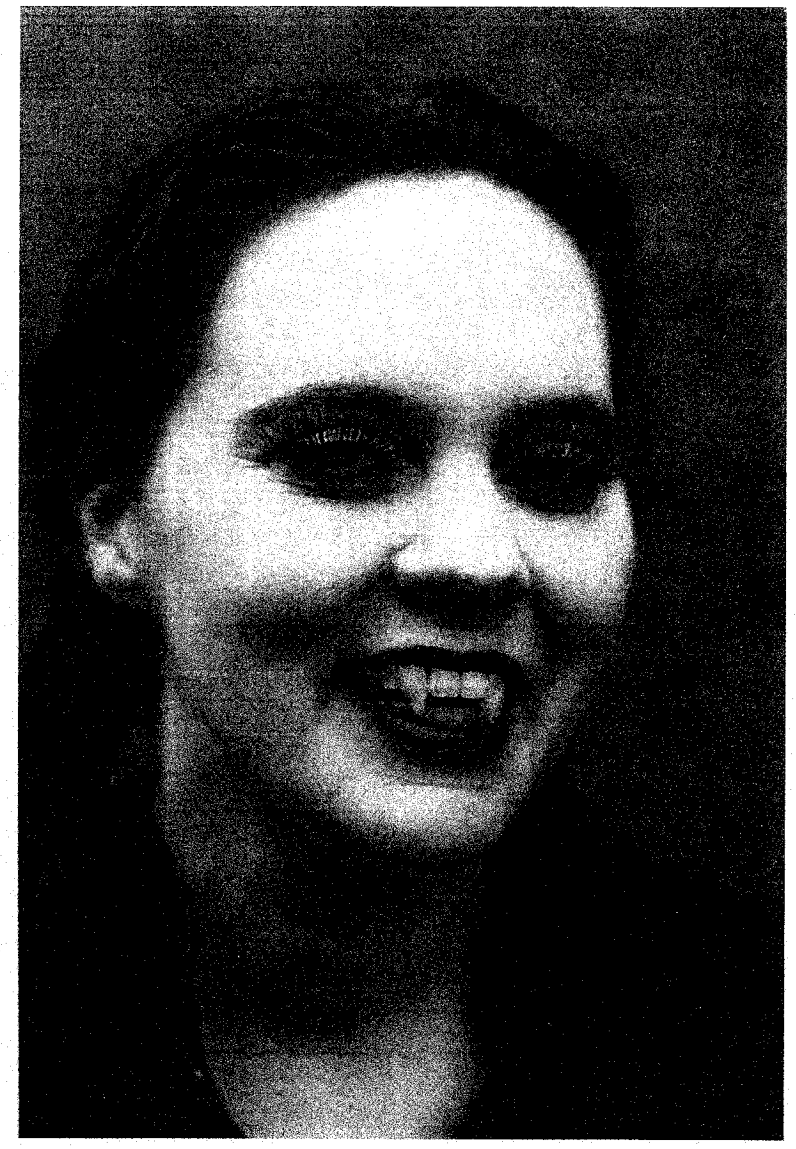


Figure 24

Figure 25

Figure 26


Meredith Paper Doll
do not cut
off tabs on
clothing
do not cut
off head
Meredith
fold along dotted line and
tape or glue stand to back of doll

Figure 27

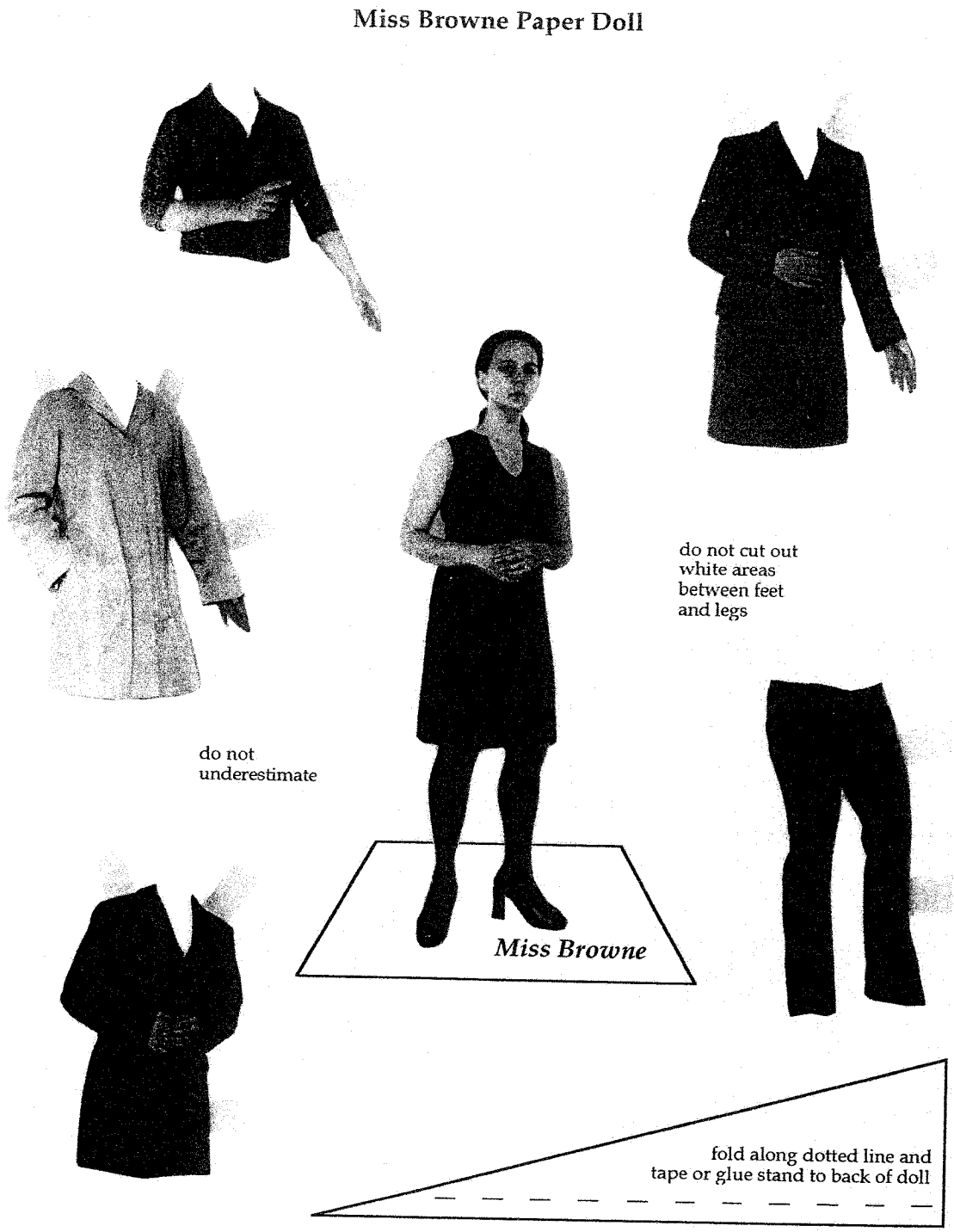

Miss Browne Paper Doll
do not cut out
white areas
between feet
and legs
do not
underestimate
Miss Browne
fold along dotted line and
tape or glue stand to back of doll

Figure 28

More Clothes for Meredith Paper Doll

SPECIAL ONE-TIME OFFER!!! To receive your own ALL NEW Special Collector's Edition Dr. Meredith Browne Doll send a self-addressed stamped envelope to the following address:

Meredith Browne
c/o Humanities Doctoral Programme
Concordia University
1455 de Maisoneve West
Montreal, QC H3H 1N9

Available 2003.

Figure 29

Figure 30

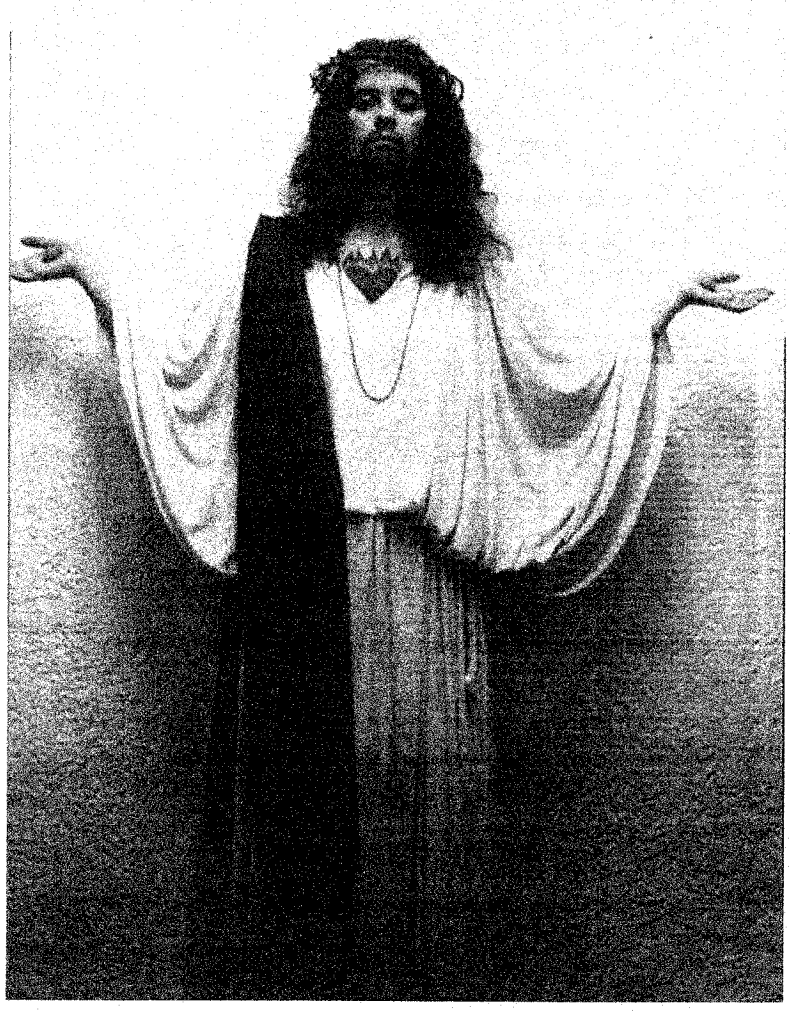


Figure 31

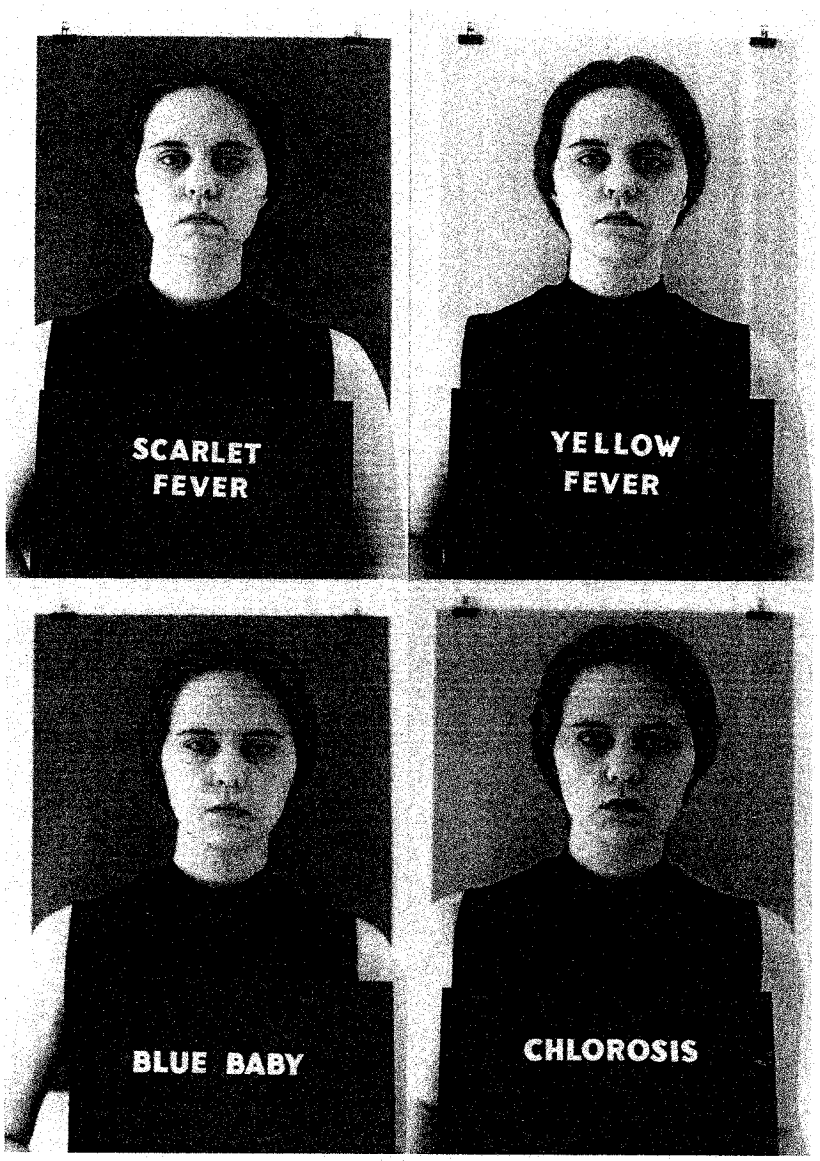


Figure 32

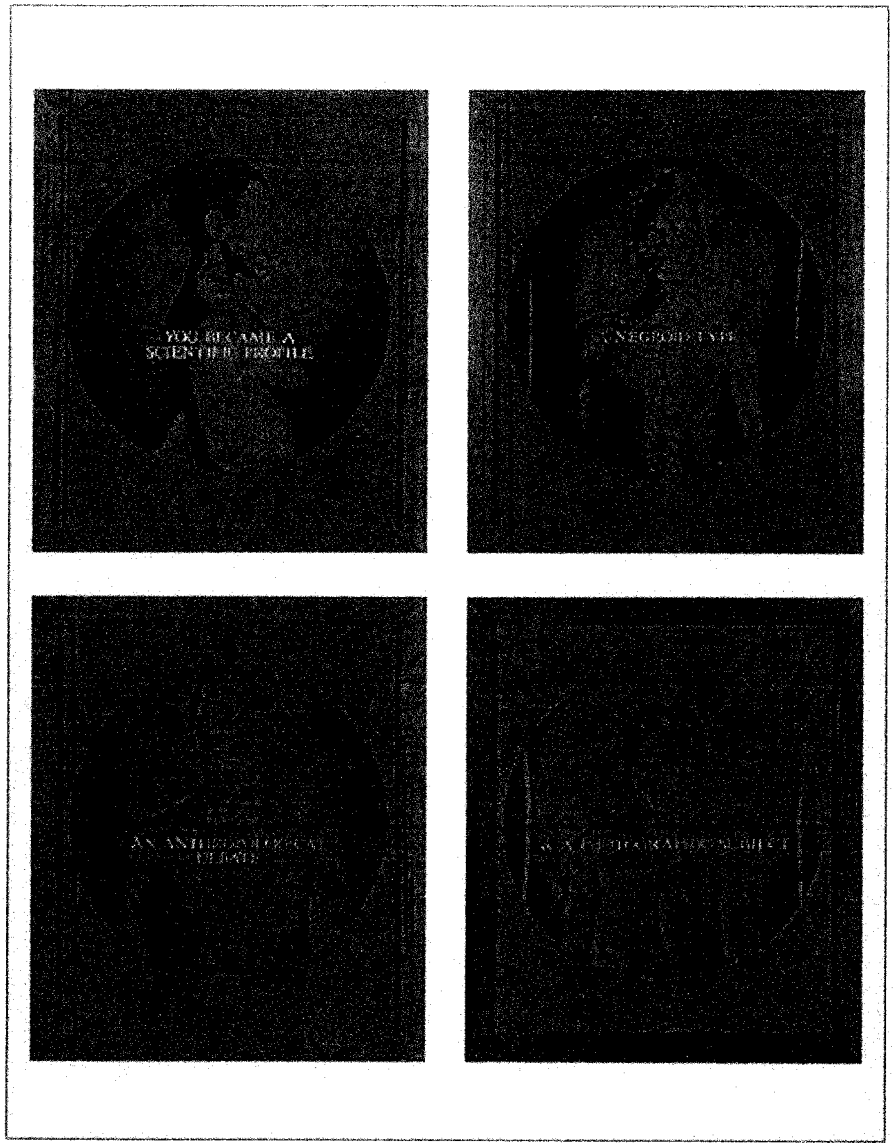


Figure 33

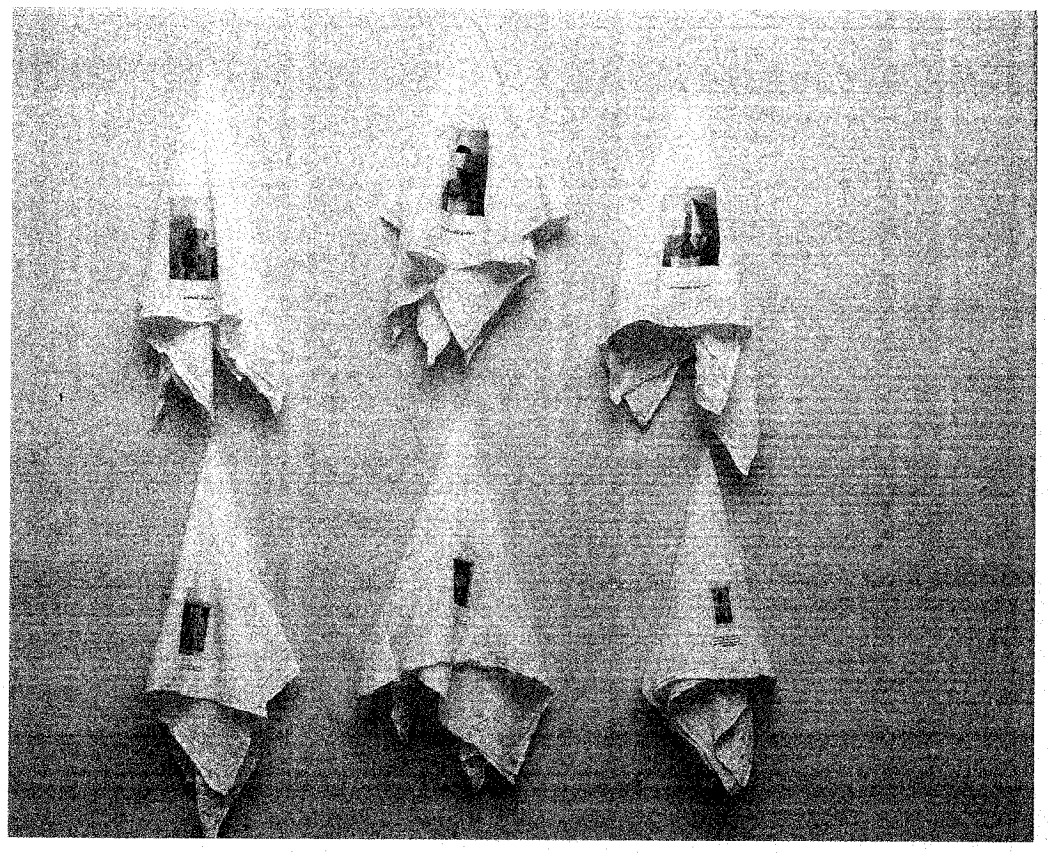


Figure 34

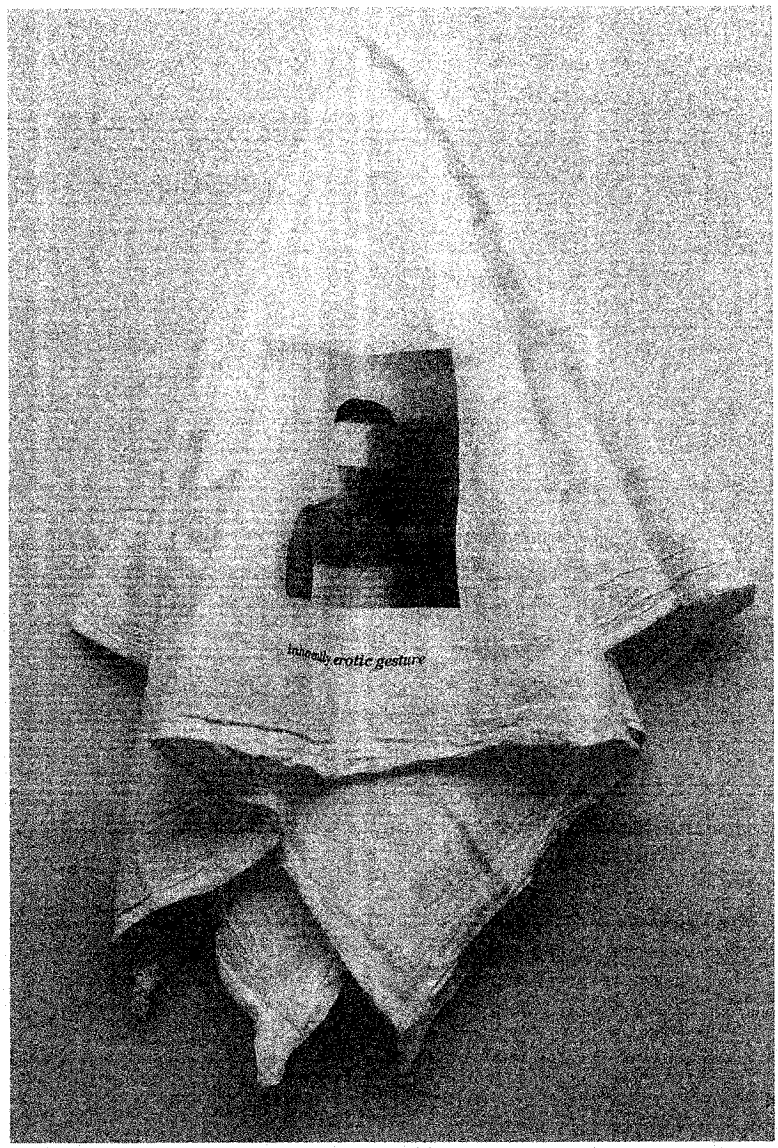


Figure 35

Figure 36


The face was covered in a veil-
like manner in oriental fashion.

Figure 37

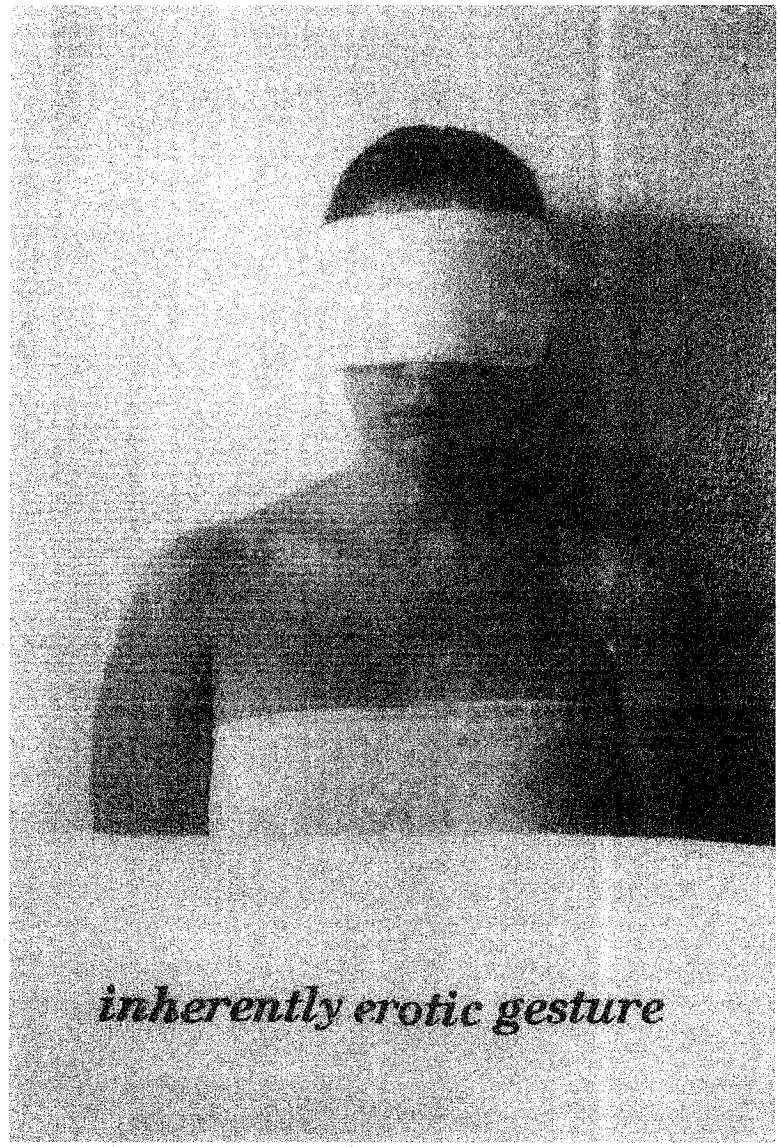


Figure 38


The veiling of the face was seen as a mysterious and inherently erotic gesture...

Figure 39

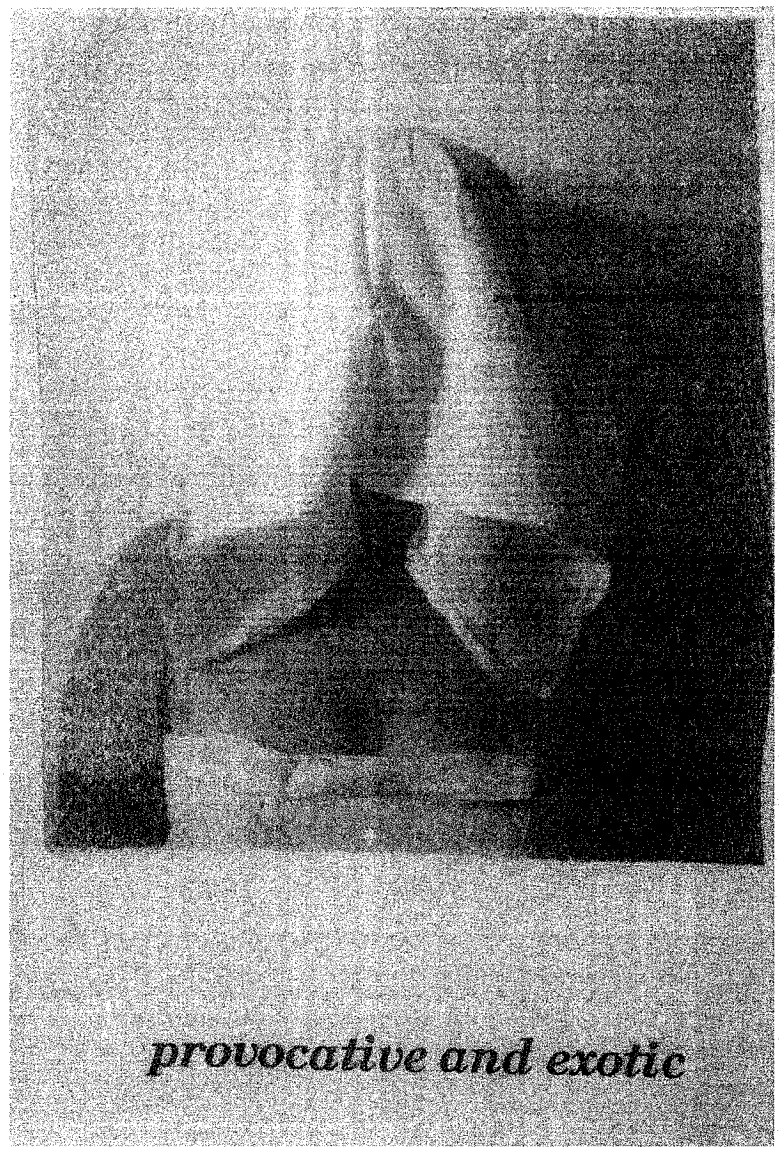


Figure 40

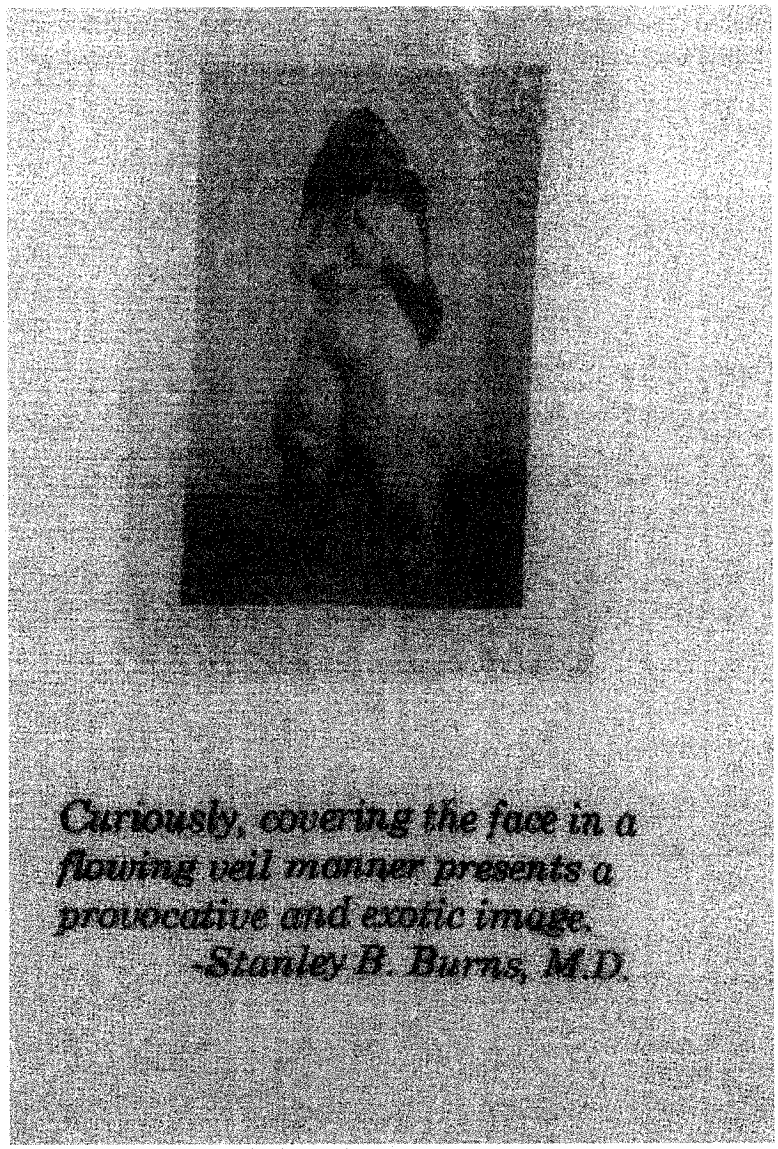

Curiously, covering the face in a flowing veil manner presents a provocative and exotic image.
-Stanley B. Burns, M.D.

Figure 41

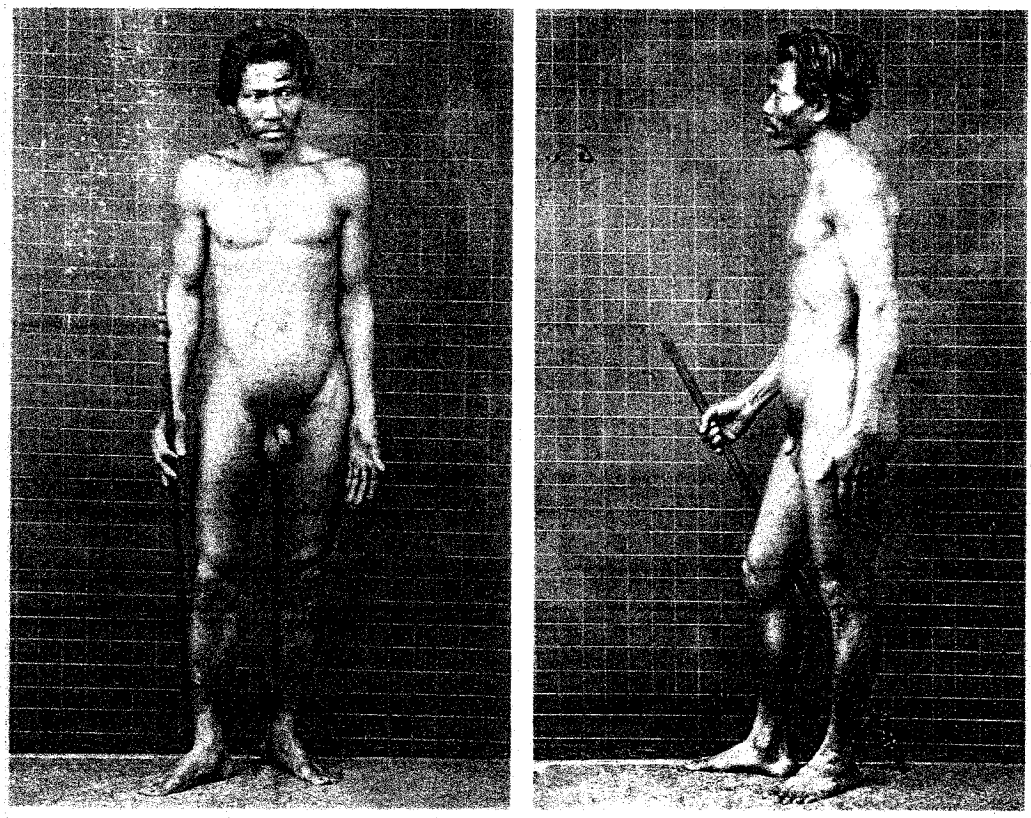


Figure 42

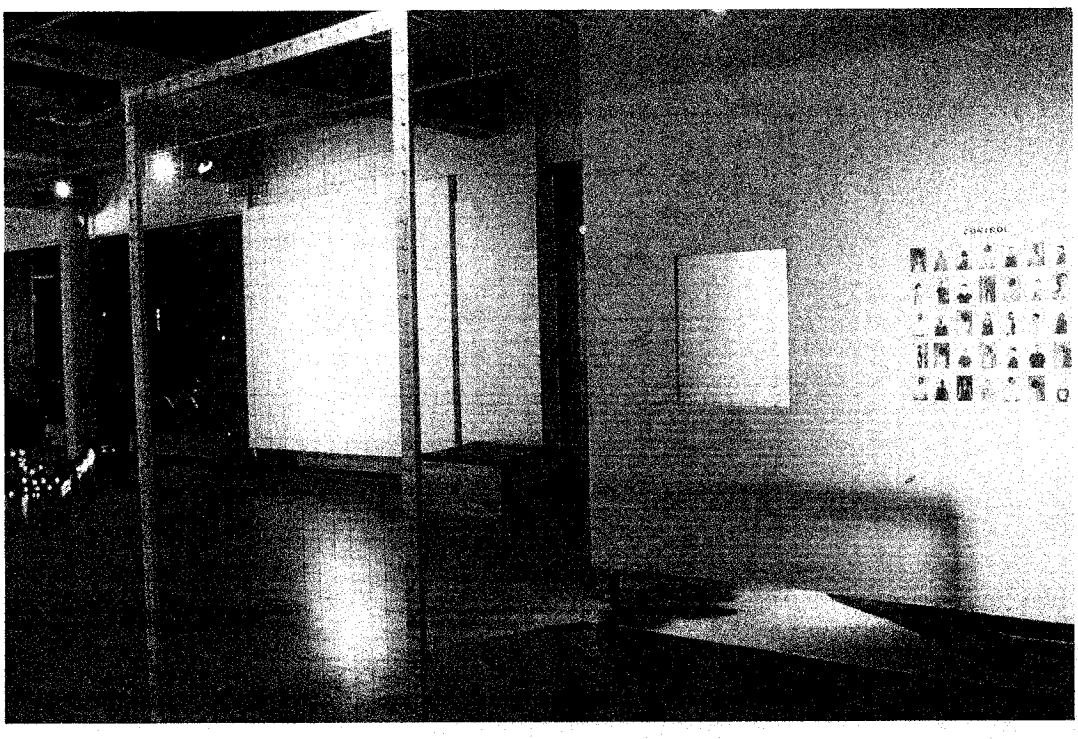


Figure 43

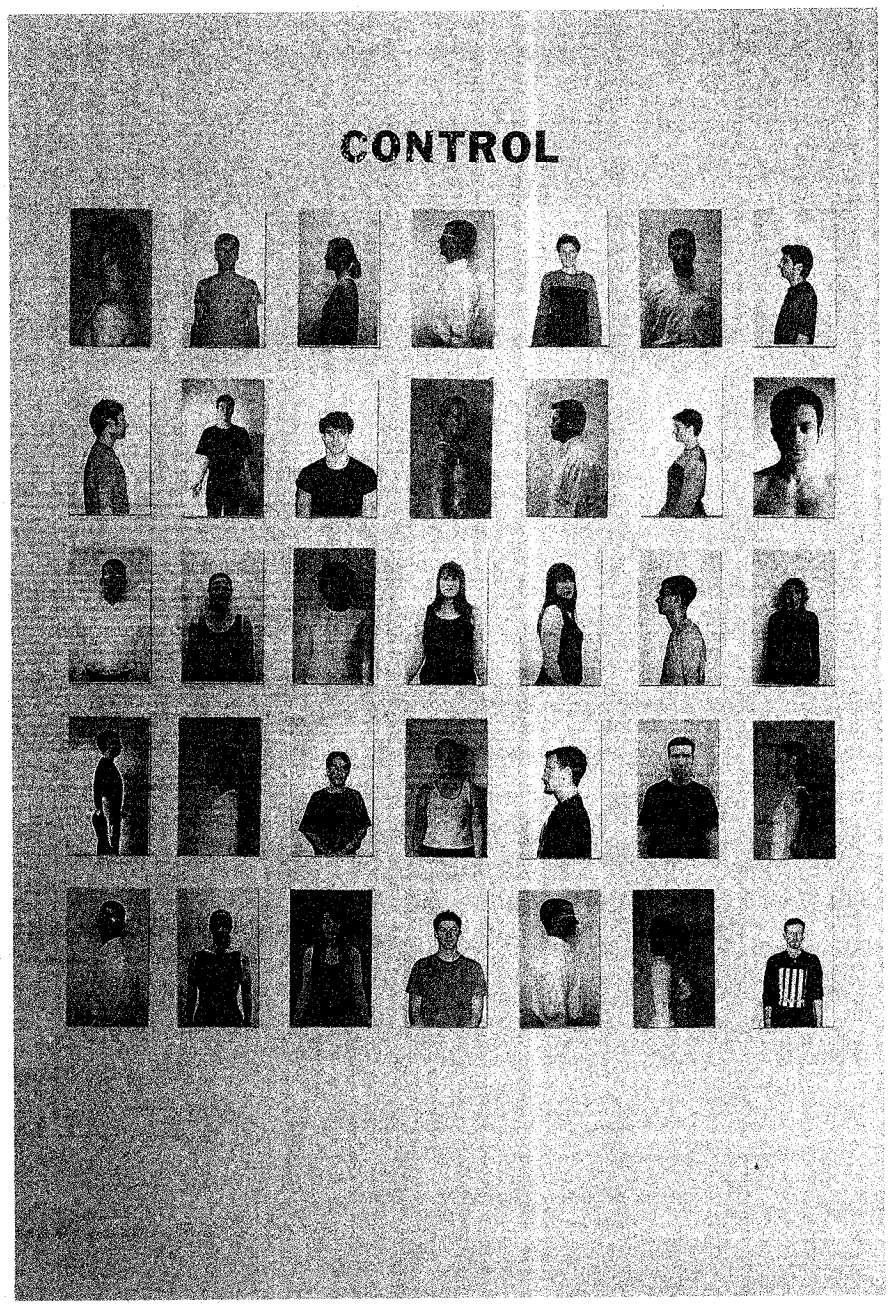


Figure 44

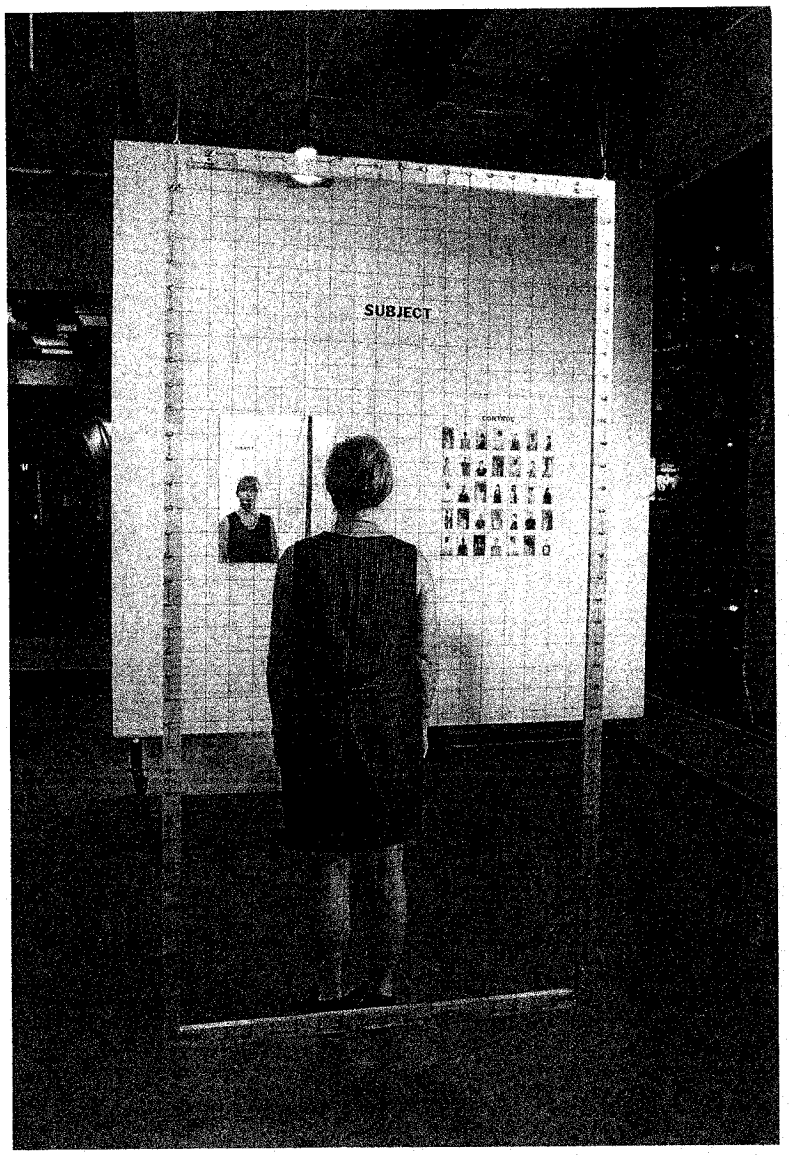


Figure 45